

**California Coastal National Monument  
Management Situation Analysis**  
*Final*

*Prepared for:*

Bureau of Land Management  
299 Foam Street  
Monterey, CA 93940  
Contact: Rick Hanks  
831/372-6105

*Prepared by:*

Jones & Stokes  
2600 V Street  
Sacramento, CA 95818  
Contact: Mike Rushton  
916/737-3000

January 2004

Jones & Stokes. 2004. California Coastal National Monument  
Management Situation Analysis. Final. (J&S 02016.02.) Sacramento,  
California. January 2004.

# Contents

Tables.....	i-4
Acronyms and Abbreviations.....	i-5
<b>Chapter 1</b>	<b>California Coastal National Monument Planning Area</b>
<b>Description .....</b>	<b>1-1</b>
Introduction.....	1-1
Planning Area Description .....	1-3
Management Approach .....	1-5
<b>Chapter 2</b>	<b>Legal and Regulatory Context.....2-1</b>
<b>Chapter 3</b>	<b>The Resource Bases .....3-1</b>
Introduction.....	3-1
Access .....	3-1
Description of Resource .....	3-1
Present Management Situation .....	3-2
Anticipated Future Conditions.....	3-2
Management Options .....	3-3
Climate and Air Quality.....	3-4
Description of Resource .....	3-4
Present Management Situation .....	3-4
Anticipated Future Conditions.....	3-5
Management Options .....	3-5
Cultural Resources .....	3-5
Description of Resource .....	3-5
Present Management Situation .....	3-6
Anticipated Future Conditions.....	3-6
Management Options .....	3-7
Education/Interpretation.....	3-9
Description of Resource .....	3-9
Present Management Situation .....	3-9
Anticipated Future Conditions.....	3-10
Management Options .....	3-10
Environmental Justice.....	3-11
Description of Resource .....	3-11
Present Management Situation .....	3-13
Anticipated Future Conditions.....	3-13
Management Options .....	3-14
Facilities and Infrastructure.....	3-15
Description of Resource .....	3-15
Present Management Situation .....	3-15

Anticipated Future Conditions.....	3-15
Management Options .....	3-16
Geology, Topography, and Soil Resources .....	3-17
Description of Resource .....	3-17
Present Management Situation .....	3-19
Anticipated Future Conditions.....	3-20
Management Options .....	3-20
Hazardous Materials.....	3-21
Description of Resource .....	3-21
Present Management Situation .....	3-22
Anticipated Future Conditions.....	3-22
Management Options .....	3-22
Land Use Planning .....	3-24
Description of Resource .....	3-24
Present Management Situation .....	3-24
Anticipated Future Conditions.....	3-25
Management Options .....	3-25
Lands and Realty.....	3-26
Description of Resource .....	3-26
Present Management Situation .....	3-27
Anticipated Future Conditions.....	3-33
Management Options .....	3-35
Minerals and Energy Programs .....	3-36
Description of Resource .....	3-36
Present Management Situation .....	3-38
Anticipated Future Conditions.....	3-38
Management Options .....	3-39
Paleontological Resources .....	3-40
Description of Resource .....	3-40
Present Management Situation .....	3-40
Anticipated Future Conditions.....	3-40
Management Options .....	3-41
Public Safety and Law Enforcement.....	3-42
Description of Resource .....	3-42
Present Management Situation .....	3-42
Anticipated Future Conditions.....	3-43
Management Options .....	3-43
Recreation .....	3-45
Description of Resource .....	3-45
Present Management Situation .....	3-47
Anticipated Future Conditions.....	3-47
Management Options .....	3-48
Research .....	3-49
Description of Resource .....	3-49
Present Management Situation .....	3-51
Anticipated Future Conditions.....	3-51
Management Options .....	3-52
Socioeconomic Conditions .....	3-54
Description of Resource .....	3-54
Present Management Situation .....	3-54

	Anticipated Future Conditions.....	3-54
	Management Options .....	3-55
	Vegetation .....	3-55
	Description of Resource .....	3-55
	Present Management Situation .....	3-57
	Anticipated Future Conditions.....	3-57
	Management Options .....	3-57
	Visual Resources.....	3-58
	Description of Resource .....	3-58
	Present Management Situation .....	3-58
	Anticipated Future Conditions.....	3-59
	Management Options .....	3-59
	Water Resources.....	3-60
	Description of Resource .....	3-60
	Present Management Situation .....	3-63
	Anticipated Future Conditions.....	3-64
	Management Options .....	3-64
	Wilderness.....	3-65
	Description of Resource .....	3-65
	Current Management Situation.....	3-66
	Anticipated Future Conditions.....	3-66
	Management Options .....	3-67
	Wildlife .....	3-67
	Description of Resource .....	3-67
	Present Management Situation .....	3-73
	Anticipated Future Conditions.....	3-74
	Management Options .....	3-74
<b>Chapter 4</b>	<b>References Cited .....</b>	<b>4-1</b>
	Printed References .....	4-1
	Web Sites .....	4-3
	Personal Communications.....	4-3
<b>Chapter 5</b>	<b>List of Preparers .....</b>	<b>5-1</b>
	Jones & Stokes.....	5-1
	Nature Tourism Planning.....	5-2
	Mad River Biologists .....	5-2

# Tables

Table 1.	BLM Planning Process .....	1-1
Table 2.	List of Legal and Regulatory Compliance Issues.....	2-2
Table 3.	Islands Not Included in the CCNM.....	3-28
Table 4.	CCNM Possible Acquisitions. ....	3-34
Table 5.	Power Production in the Coastal Counties .....	3-36
Table 6.	1992 California Coastal State Park and Recreation Area Attendance (in thousands of persons) .....	3-45
Table 7.	2002 National Park Service Visitor Summary by Park.....	3-46
Table 8.	California Coastal Research Institutions .....	3-50
Table 9.	Coastal Impaired Water Bodies .....	3-62
Table 10.	Wilderness Areas and Potential Wilderness Areas in Coastal California.....	3-66
Table 11.	Primary Breeding Birds and Predatory Birds of the CCNM .....	3-69
Table 12.	Marine Mammals of the CCNM .....	3-70

# Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
AIRFA	American Indian Religious Freedom Act
ARB	California Air Resources Board
ARPA	Archaeological Resources Protection Act
BLM	U.S. Bureau of Land Management
BP	before present
Caltrans	California Department of Transportation
CCNM	California Coastal National Monument
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System
CRMP	Cultural Resources Management Plan
DFG	California Department of Fish and Game
DOI	U.S. Department of the Interior
DPR	California Department of Parks and Recreation
EIS	environmental impact statement
ESA	Endangered Species Act
FLPMA	Federal Land and Policy Management Act
GIS	geographic information systems
HAZWOPER	hazardous waste operations and emergency response
MMS	Minerals Management Service
MOU	memorandum of understanding
MSA	Management Situation Analysis
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NANPCA	Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NISA	National Invasive Species Act of 1996
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSPR	Office of Spill Prevention and Response (OSPR)
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PRBO	Point Reyes Bird Observatory

RMP	Resource Management Plan
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Officer
SIMoN	Sanctuary Integrated Monitoring Network
SWRCB	State Water Resources Control Board
TCP	traditional cultural property
USCG	U.S. Coast Guard
UCLA	University of California, Los Angeles
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Work Plan	BLM Work Plan for EOI Emergency Preparedness & Response Strategy—Oil Discharge & Hazardous Substance Releases



# Chapter 1

## California Coastal National Monument Planning Area Description

### Introduction

This Management Situation Analysis (MSA) is Step 4 in the U.S. Bureau of Land Management's (BLM's) nine-step land use planning process (Table 1). This process will ultimately result in implementation of a Resource Management Plan (RMP) for the California Coastal National Monument (CCNM). An RMP is a set of comprehensive, long-range decisions concerning the use and management of resources administered by BLM. In general, the RMP does two things: (1) it provides an overview of goals, objectives, and needs associated with public land management; and (2) it resolves conflicts among multiple uses and issues that drive preparation of the RMP.

**Table 1.** BLM Planning Process

---

Step 1. Identify issues
Step 2. Develop planning criteria
Step 3. Collect/consolidate resource data
Step 4. Prepare Management Situation Analysis
Step 5. Formulate alternatives
Step 6. Estimate effects
Step 7. Select preferred alternative; conduct public review and obtain comments
Step 8. Prepare Record of Decision
Step 9. Monitor and evaluate

---

The focus of this MSA and, ultimately, of the related RMP, is management of the CCNM. As part of the data collection step (Step 3) for the CCNM planning effort, the resources associated with the CCNM were assessed. The results of this assessment are presented in this MSA and include an overview of the current condition of each resource, existing management policies pertinent to the resource, anticipated future conditions, and future management options. This

MSA also references some information not directly related to the resources or the management issues, including planning documents from local communities.

Together, the resource assessments and the evaluation of management policies and options presented in this MSA provide baseline information for developing the RMP and its environmental impact statement (EIS). For example, for each resource, the Present Management Situation and Management Options sections of this MSA will be used to develop management alternatives, including the No-Action Alternative.

This particular resource management planning process is different in many ways from the standard BLM RMP process, and the MSA and RMP will be revised accordingly. Some of these unique differences and challenges include:

**Previous Management.** The lands of the CCNM have been in federal ownership since California was ceded to the United States in 1857. Although the lands have been under General Land Office jurisdiction since 1812 and in BLM hands since its establishment in 1946, there is no preexisting BLM RMP specifically covering the entire area of the CCNM, so data on the present management situation are much sparser than in traditional RMP efforts.

Protection of the federally owned rocks and islands off the coast of California was applied as early as 1930, when President Herbert Hoover issued an executive order withdrawing them from lands and minerals entry. In 1983, Public Land Order 6369 withdrew all of the unreserved islands, rocks, pinnacles, and exposed reefs above mean high tide off the coast of California from settlement, sale, surface entry, mining, and mineral leasing in order to protect the islands for establishment of the California Islands Wildlife Sanctuary. A memorandum of understanding between BLM and the California Department of Fish and Game (DFG) was signed in 1989, which gave DFG the authority to manage the Sanctuary for the benefit of its wildlife resources. In 1990, these same rocks and islands were designated by BLM as an Area of Critical Environmental Concern.

Land use plans for the five coastal BLM field offices in which the CCNM is located have limited, if any, references to the rocks and islands that make up the CCNM.

**Geographic Scale.** The CCNM runs the entire length of California's coast and reaches 12 nautical miles out from the California shore. The monument encompasses lands that emerge above the mean high tide line. The sheer number of adjacent agencies, landowners, and planning authorities mandates that this planning effort focus on establishing partnerships with many of these adjacent groups in all management options.

**Character of the Managed Lands.** The offshore rocks, small islands, exposed reefs, and pinnacles that comprise the CCNM are not contiguous, serve mainly as homes for migratory birds and pinnipeds, and are restricted from mineral and human entry. This contrasts sharply with the character of (and issues facing) most BLM-managed lands.

**Availability of Data.** These offshore formations, although adjacent to hundreds of coastal jurisdictions, were never officially included in any of them; therefore, any data regarding them are lacking. For example, no soil surveys or U.S. Geological Survey (USGS) surveys have been conducted for these lands.

## Planning Area Description

The CCNM was established by President William J. Clinton by Presidential Proclamation on January 11, 2000, under the discretionary authority given to the President of the United States by Section 2 of the Antiquities Act of 1906 (34 Stat. 225, 16 U.S.C. 431). Section 2 authorizes the President to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

The purpose of the CCNM, as stated in the Presidential Proclamation, is to protect and manage biological and geological resources by protecting “all unappropriated or unreserved lands and interest in the lands owned or controlled by the United States in the form of islands, rocks, exposed reefs, and pinnacles above mean high tide<sup>1</sup> within 12 nautical miles of the shoreline of the State of California.” The Proclamation also functions to elevate California’s offshore lands to a national level of concern, focuses the primary management vision on the protection of geologic features and habitat for biota, and tasks BLM with the ultimate responsibility for ensuring that protection.

Offshore lands with an area greater than 4 square meters within 12 nautical miles of the California coast number more than 12,800 rocks and islands and comprise a total of 225,000 acres. However, a number of these offshore features are not part of the CCNM, including the northern and southern Channel Islands (although some of the rocks offshore of these islands are part of the CCNM), the Farallon Islands, and others discussed in more detail under Lands and Realty. The CCNM protects about 900 acres in total, including at least 11,500 rocks and small islands along 1,100 miles of coastline.

Spanning the entire length of California, the CCNM comprises a variety of geologic and topographic features. Some of the islands off the coast and their surrounding rocks and islands were formed through igneous processes—plutonic and volcanic activity. Other nearshore rocks and islands are sedimentary or metamorphic in formation, the result of deposition of geologic material over

---

<sup>1</sup> The Presidential Proclamation does not define the terms “islands,” “rocks,” “exposed reefs,” or “pinnacles.” However, these terms are interpreted to include, in sum, all lands exposed above mean high tide. “Mean high tide” (also referred to in this document as “mean high tide line” and “mean high water”) refers to the average of all observed high tide heights. The observed height varies at different locations along the coast; as a result, the specific tide height that constitutes the boundary of the CCNM will be variable based on location.

time, and in some cases, subsequent modification by pressure and heat. The rocks and small islands contained in the CCNM are always changing due to geologic processes—some of these rocks became separated from the mainland because of erosion from wave, wind, and tidal action; these forces will eventually erode certain islands and rocks below mean high tide, and cause other areas currently attached to the shoreline and larger islands to eventually become separated. These features make up the topmost portion of the outer continental shelf, which extends westward of California for 4 to 5 miles; during the Pleistocene Epoch, the shelf was exposed above sea level, defining California's prehistoric coastline some 20,000 or more years before present (BP).

In general, wind and wave action have also determined the physical characteristics of the coastline and its associated CCNM features. North of Point Conception (in Santa Barbara County), strong waves and wind have worked on the California Coastal Range formations to form numerous offshore rocks and islands. South of Point Conception, however, the coastline is more protected from the impact of storm waves by large offshore islands (i.e., the Channel Islands). The formations of the Transverse and Peninsular Ranges of the south coast have produced fewer rocks and islands.

The biological resources of the monument are influenced by these physical characteristics, as well as other processes such as climate and ocean currents. Climate along the coastline of California varies, with cooler temperatures, more rainfall, and more extensive cloud cover in the northern portion of the state. Conditions become milder in a continuum southward. The California current, carrying water cooled by its passage through the northern latitudes, flows southward along the shore from the Washington–Oregon border to Southern California, and brings nutrients and biota into the coastal waters<sup>2</sup> surrounding the CCNM.

These rocks, small islands, exposed reefs, and pinnacles are the homes and breeding grounds of many marine and terrestrial species—including birds, fish, and marine mammals. The rocks support a diverse assemblage of rocky intertidal zone plant and animal species. In the area spanned by the CCNM, people enjoy recreational activities such as fishing, kayaking, wildlife viewing, scuba diving, and snorkeling. The CCNM is also of aesthetic and economic value to coastal communities because the rocks and islands provide beautiful scenery for local residents and visitors, as well as a focal point in a vast ocean viewscape. While the CCNM comprises, and its direct management addresses, only those portions of the rocks and islands above mean high tide line, the monument features are a part of a larger coastal and marine ecosystem that both depends on and supports the CCNM.

---

<sup>2</sup> For the purposes of this document, “coastal waters” refer to those waters within 12 nautical miles of the coast (i.e., those waters that surround the CCNM).

# Management Approach

Because the CCNM spans the entire length of California's coastline, management of the CCNM provides unique opportunities and challenges. The CCNM is located adjacent to or embedded within many jurisdictions, including lands and waters reserved, owned, or administered by the military, the U.S. Coast Guard (USCG), the California Department of Parks and Recreation (DPR), the National Park Service (NPS), the National Oceanic and Atmospheric Administration (NOAA) (which manages the four offshore marine sanctuaries), the U.S. Forest Service (USFS), the U.S. Fish and Wildlife Service (USFWS), the California State Lands Commission, private landholdings, 15 coastal counties, and numerous cities, communities, and municipalities.

Although the Presidential Proclamation makes it very clear that the CCNM will remain under federal ownership and directs the Secretary of the Interior to manage the CCNM through BLM, BLM needs to continue existing partnerships with other governmental agencies and private entities, while also pursuing new collaborations, in order to effectively administer the CCNM. To address the wide array of partnership opportunities, both existing and potential, three basic partnership categories have been established. These three partnership categories for the CCNM are described as follows:

**Core Managing Partners.** BLM, DFG, and DPR serve as CCNM's "core managing partners." These agencies have the day-to-day management responsibility for the entire CCNM. Through an interim MOU signed in spring 2000, BLM extended its partnership with DFG and added DPR, the state agency that administers 25 percent of the California coast. Other partners may have specific interests and involvement in specific parts or program aspects of the CCNM, but the core managing partners have the responsibility for the overall management of the CCNM. Although BLM has the ultimate responsibility for the CCNM, it has brought DFG and DPR in to work collaboratively on the day-to-day management of the entire monument. The MOU under which this management partnership operates specifically states that the three agencies will:

collaborate in the management of the CCNM;

authorize appropriate uses with the CCNM only following consultation among the parties;

work as partners in preserving the objects of historic and scientific interest for which the CCNM was established;

work on mapping and understanding the resources within the CCNM;  
and

work with the public to explain the values of the CCNM.

All three core managing partners are resource management agencies with statutory and regulatory authority that allows them to operate within the entire area of the CCNM. Although each of the agencies has their own unique authorities, collectively they are the three agencies that can provide the management that the CCNM will need. As core managing partners, BLM, DFG, and DPR are responsible for ensuring that the entire monument is effectively managed and for overseeing the CCNM's day-to-day management. BLM does not anticipate adding any other core managing partners. The involvement of other entities with the management of the CCNM will be formalized through the use of the other two partnership categories.

**Collaborative Partners.** Most of the partnerships related to the CCNM will fall into this category. "Collaborative partnerships" will be developed with a wide variety of governmental, tribal, and private agencies and entities. These partners have specific interests or responsibilities that, when linked with the CCNM, enhance both the monument's purpose and the mission, goals, and/or purpose of the collaborative partner. This will include entities that oversee similar resources (e.g., seabirds or tidepools), have program-related interests (e.g., maritime heritage or marine protected species), are involved in a related activity (e.g., research or education), and/or oversee adjacent locations (e.g., area within a National Marine Sanctuary).

So far, collaborative partnership agreements have been developed with NOAA's Monterey Bay National Marine Sanctuary and Point Reyes Bird Observatory (PRBO) Conservation Science, a non-profit membership organization dedicated to conserving birds and other wildlife and their ecosystems through innovative scientific research and outreach.

Other potential collaborative partners include, but are not limited to, USCG, NOAA National Marine Protected Areas Center, NOAA National Marine Fisheries Service (NOAA Fisheries), USFWS, NPS, Minerals Management Services (MMS), USGS, the California State Lands Commission, the California Coastal Conservancy, Santa Barbara Maritime Museum, University of California (UC) Davis Bodega Marine Laboratory, UC San Diego Scripps Institute of Oceanography, California State University Moss Landing Marine Laboratories, Monterey Bay Aquarium, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Orange County Marine Institute, Point Arena Lighthouse Keepers, the Ocean Conservancy, and Save Our Shores.

**Stewards.** This partnership category is for select entities with ownership and management responsibility for a specific portion of the coast that adjoins part of the CCNM. These partners agree to serve as "stewards" for that portion of the CCNM. Stewards will work with BLM and other partners to help in the management of a portion of the CCNM that is offshore of the steward's onshore property. Examples of potential stewardship partners include Vandenberg Air Force Base (Santa Barbara County), the Town of Trinidad (Humboldt County), Crescent City Harbor District (Del Norte County), the

Pebble Beach Company (Monterey County), and possibly some individual private landowners.

A stewardship agreement will be developed with each approved steward. Each agreement will identify the specific portion of the CCNM for which the steward will assist in the long-term management, as well as outline the expected role and responsibilities of a steward while working with BLM and its various CCNM partners.

The focus of management options for the CCNM will be on protection, research, education, and planning through collaboration, cooperation, and coordination with the core managing partners and with other collaborative partners and stewards interested in management of California's coastline. Management activities may involve direct management of the CCNM or indirect management through activities that are not located within the boundaries of the CCNM itself (e.g., landside interpretive facilities). In many cases, proposed management of the CCNM will involve prototyping, or implementing management practices in a limited area, followed by the adaptive implementation of these practices to a wider area based on the results of the prototype.

The specific management areas and resource elements for the CCNM were developed through the scoping process, which is summarized in the *Scoping Report for the California Coastal National Monument Resource Management Plan* (Jones & Stokes 2003).

## Chapter 2

# Legal and Regulatory Context

Numerous legal and regulatory requirements apply to the CCONM. Table 2 outlines some of these requirements, including federal laws, decrees, executive orders, and regulations, and state and local laws and regulatory processes. The table identifies any actions related to regulatory requirements that will be required during RMP preparation and approval. This table should not be considered comprehensive, as literally hundreds of organizations have jurisdiction over the California coast and its waters. Presently, there is insufficient BLM staff time as well as insufficient funds to research and identify all coastal organizations with coastal management authority, planning jurisdiction, or regulatory influence.



**Table 2.** List of Legal and Regulatory Compliance Issues

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
<b>FEDERAL LEVEL</b>				
The Proclamation	The President of the United States	Antiquities Act, Section 2	Reflect in the Resource Management Plan (RMP)	Ensure consistency with the Proclamation.
National Environmental Policy Act (NEPA)	U.S. Bureau of Land Management (BLM)	Federal action (not a categorical exclusion)	Prepare an environmental impact statement (EIS)	Compliance efforts are currently in progress.
Federal Land Policy and Management Act (FLPMA)	BLM	Federal action	Provide a statement in the RMP; abide by the provisions of the FLPMA	Compliance efforts are currently in progress.
Coastal Zone Management Act	Coastal Programs Division (CPD) within National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM); California Coastal Commission; California Coastal Conservancy	Federal action	Reflect in the RMP under "Planning Criteria"; conduct a consistency analysis with the California Coastal Management Plan and Local Coastal Programs	Assess impacts of management actions needed to implement the plan decisions.
Clean Water Act (General Provisions)	U.S. Environmental Protection Agency (EPA); U.S. Army Corps of Engineers (Corps); Regional Water Quality Control Board (RWQCB)	Federal action	Reflect in the RMP under "Planning Criteria"	Assess impacts of management actions needed to implement the plan decisions.
Clean Air Act	EPA; Air Quality Management District (AQMD); Air Pollution Control District (APCD)	Federal action	Reflect in the RMP under "Planning Criteria"	Assess impacts of management actions needed to implement the plan decisions.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
Endangered Species Act	U.S. Fish and Wildlife Service (USFWS); NOAA Fisheries	Federal action	Reflect in the RMP under “Planning Criteria”; conduct Section 7 consultation	(1) Assess impacts of management actions needed to implement the plan decisions.  (2) Prepare a Biological Assessment (BA).
Marine Mammal Protection Act (MMPA)	USFWS; NOAA National Marine Fisheries Service (NOAA Fisheries)	Federal action	Reflect in the RMP under “Planning Criteria”	Ensure consistency with MMPA.
Magnuson-Stevens Fishery Conservation and Management Act	USFWS; NOAA Fisheries	Federal action	Reflect in the RMP under “Planning Criteria”	Ensure consistency with Magnuson-Stevens Fishery Conservation and Management Act.
Migratory Bird Treaty Act	USFWS	Federal action	Reflect in the RMP under “Planning Criteria”	Assess impacts of management actions needed to implement the plan decisions.
Federally signed treaties	Bureau of Indian Affairs; Federally Recognized Tribes (e.g., Yurok Tribe and Trinidad Ranchería)	Federal action	Reflect in the RMP under “Planning Criteria”	Treat tribes as consulting parties.
Indian Trust Asset and Trust Fund Management and Reform Act of 2002	U.S. Department of the Interior (DOI)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Treat tribes as consulting parties.  (2) Conduct coordination with the Trust Fund and Trust Asset Management and Monitoring Plan for each tribe.
National Marine Sanctuaries Act	National Marine Sanctuary Program (within NOAA’s National Ocean Service)	Federal action	Reflect in the RMP under “Planning Criteria”	Ensure consistency with National Marine Sanctuaries Act.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
National Historic Preservation Act (NHPA)	State Historic Preservation Office	Federal action	Reflect in the RMP under “Planning Criteria”; follow the National Programmatic Agreement	Comply with Section 106 and 110 processes as triggered by NEPA.
Land Use Management Plans (including National Parks, Indian Lands [Indian Affairs], etc.)	Varies	Federal action	Reflect in the RMP under “Planning Criteria”; research land use management plans	Assess impacts of management actions needed to implement the plan decisions.
Rivers and Harbors Act	U.S. Department of Defense (DOD) (U.S. Coast Guard [USCG], U.S. Army Corps of Engineers [Corps]); U.S. Department of Homeland Security; USFWS	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Control of ingress/egress in the coastal zone.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions.
Fort Ord	DOD (Army)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions.
Vandenberg Air Force Base (AFB)	DOD (Air Force)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
Camp Pendleton	DOD (Marines)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions (the project cannot restrict their rights).
Point Mugu	DOD (Navy)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions (the project cannot restrict their rights).
Redwood National Park	National Park Service (NPS)	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement plan decisions.
Point Reyes National Seashore	NPS	Federal action	Reflect in the RMP under “Planning Criteria”	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement the plan decisions.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
San Francisco: Golden Gate National Recreation Area (including Fort Point National Historic Site, San Francisco National Historic Park, and Muir Woods National Monument)	NPS	Federal action	Reflect in the RMP under "Planning Criteria"	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement the plan decisions.
Channel Islands National Park	NPS	Federal action	Reflect in the RMP under "Planning Criteria"	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement the plan decisions.
Santa Monica Mountains National Recreation Area	NPS	Federal action	Reflect in the RMP under "Planning Criteria"	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement the plan decisions.
Cabrillo National Monument	NPS	Federal action	Reflect in the RMP under "Planning Criteria"	(1) Conduct coordination.  (2) Assess impacts of management actions and land use allocations needed to implement the plan decisions.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
<b>STATE LEVEL</b>				
California Environmental Quality Act (CEQA)	California State Department of Fish and Game (DFG), California Department of Parks and Recreation (DPR)	State project	Prepare environmental impact report (EIR)	Compliance efforts are currently in progress.
Memorandum of understanding (MOU)	Resource Agency of California, DFG, DPR	State project	Reflect in the RMP under "Planning Criteria"	Compliance efforts are currently in progress
California Endangered Species Act (ESA)	DFG	Take	Reflect in the RMP under "Planning Criteria"	(1) Assess impacts of management actions and land use allocations needed to implement the plan decisions.  (2) Ensure compliance with Section 2081 of the California Fish and Game Code; if same species as ESA, prepare a concurrence letter.
California Coastal Act	Resources Agency, California Coastal Commission	Project in coastal zone	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Marine Life Protection Act	DFG	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Marine Management Improvement Act	Resources Agency (DPR, DFG, and State Water Resources Control Board)	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Individual State Park Management Plans	DPR	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
California Coastal Management Plan	NOAA's Office of Ocean and Coastal Resource Management (OCRM)	State project	Reflect in the RMP under "Planning Criteria"	(1) Assess impacts of management actions needed to implement the plan decisions.  (2) Conduct coordination.
Offshore/onshore utility rights:		State project	Reflect in the RMP under "Planning Criteria"	(1) Assess impacts of management actions needed to implement the plan decisions.  (2) Conduct coordination.
(1) General permit: right-of-way use	(1) California State Lands Commission			(3) Determine effects on utilities (e.g., transoceanic cables, oil docking, fluid materials docking)
(2) Temporary use permit (as needed)	(2) DPR			
Natural Reserve System (e.g., Big Creek Natural Reserve, Big Sur)	University of California	State project	Reflect in the RMP under "Planning Criteria"; research Natural Reserve System coastal locations	(1) Assess impacts of management actions needed to implement the plan decisions.  (2) Conduct coordination.
Public Lands/Public Trust Lands	California State Lands Commission, Land Management Division	State project	Reflect in the RMP under "Planning Criteria"; research coastal locations of public lands	(1) Assess impacts of management actions needed to implement the plan decisions.  (2) Conduct coordination.
<b><i>California Coastal Commission</i></b>				
<b>North Coast District</b>				
Local Coastal Program	Del Norte County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Crescent City	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
Local Coastal Program	Humboldt County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Trinidad	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Arcata	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Eureka	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	Mendocino County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Fort Bragg	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Point Arena	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
<b>North Central Coast District</b>				
Local Coastal Program	Sonoma County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	Marin County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of San Francisco	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Pacifica	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Half Moon Bay	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.



**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
Local Coastal Program	San Mateo County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
<b>Central Coast District</b>				
Local Coastal Program	Santa Cruz County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Santa Cruz	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Capitola	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	Monterey County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Monterey	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Pacific Grove	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Carmel	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	San Luis Obispo County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Morro Bay	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Pismo Beach	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
<b>South Central Coast District</b>				
Local Coastal Program	Santa Barbara County	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of Carpinteria	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	Ventura County	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	Los Angeles County (part)	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of Malibu	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Long Range Development Plan	University of California, Santa Barbara	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Public Works Plan	Malibu State Beaches	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
<b>South Coast District</b>				
Local Coastal Program	Los Angeles County	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of Los Angeles	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of Palos Verdes Estates	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of Rancho Palos Verdes	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
Local Coastal Program	City of Avalon	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	Orange County	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Costa Mesa	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Newport Beach	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Irvine	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Laguna Beach	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Laguna Del Niguel	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of Dana Point	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Local Coastal Program	City of San Clemente	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Long Range Development Plan	Pepperdine University	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Master Plan	Port of Los Angeles	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.
Public Works Plan	Crystal Cove	State project	Reflect in the RMP under "Planning Criteria"	Conduct coordination only.

**Table 2.** Continued

Item	Responsible Governing Agency	Trigger	Process	Action Required during RMP Preparation/Approval
<b>San Diego Coast District</b>				
Local Coastal Program	San Diego County	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.
Local Coastal Program	City of San Diego	State project	Reflect in the RMP under “Planning Criteria”	Conduct coordination only.

## Chapter 3

# The Resource Bases

## Introduction

The following pages describe the resources and conditions within the CCNM that are principal to development of a comprehensive RMP. The present status of resources and conditions are described, the current management activities that affect the resources and conditions are identified, anticipated future conditions without management change are predicted, and potential new management strategies are listed.

It is important to note that the CCNM is the only BLM national monument to extend through five BLM field offices. CCNM is within the coastal jurisdiction of BLM's Arcata, Ukiah, Hollister, Bakersfield, and Palm Springs/South Coast Field Offices. Without a staff assigned full-time to the CCNM, the monument manager has established an ad-hoc staff of "adjunct" personnel from all five of BLM's coastal field offices, California regional staffers, and BLM California State Office specialists to assist with the management needs of the CCNM.

## Access

### Description of Resource

Approximately 25 percent of the California shoreline is owned by DPR, and another 17 percent of the shoreline is also publicly owned and accessible (California Coastal Commission 1997). More than 850 public access points are available along the coast. These access points are managed by a wide variety of federal, state, and local jurisdictions; access ranges from coastal overlooks on bluffs to full-service parks with boat launches, beaches, and picnicking and camping facilities.

The rocks and islands in the CCNM offer limited public access because they are located offshore, separated from the mainland by heavy surf; are of small average size; and in some instances have steep rock faces. Safety risks, a lack of landing areas, and limited recreational values naturally limit public access to the rocks. However, some rocks accommodate exploration because they are close to the

mainland at low tides or because they have safe landing areas for boats. In these cases, people take the opportunity to climb rocks, hike, explore tidepools, and study nature. Whether people can successfully access the monument by watercraft depends on the presence of boat launch ramps, beach access points, marinas, and sea conditions.

As discussed under Recreation, public access to the CCNM presents some threats to the monument's resources. Most threatened by access are the seals and sea lions that haul out on the rocks and beaches, and the seabirds that rest and nest on the coastal rocks. Boats and aircraft, if they approach too closely, can drive animals away from their preferred habitat.

Currently, no comprehensive data exist on the types and locations of public access points and the types of uses the access points support. As a result, resource management, education, access, and law enforcement efforts are prioritized without a full picture of public access pressures. For example, the impacts of various recreational and nonrecreational activities on wildlife are not thoroughly understood. Further specific information on such impacts would allow land managers to enforce minimum distances between wildlife and coastal users, and would supplement data regarding long-term trends of wildlife disturbance.

## **Present Management Situation**

Almost all publicly owned access areas along the California coast are in non-BLM jurisdictions. The management and control of access to the CCNM depends on cooperation among the many entities and land managers that oversee these access points. The diversity of jurisdictions, the large number of unstaffed access points, limited operational budgets, and varying management priorities make monitoring coastal activities and conducting effective public outreach very difficult.

## **Anticipated Future Conditions**

Population growth and the increasing popularity of coastal recreation will place increased pressure on access points along the coast. Assuming that current management strategies are carried forward, publicly available information about resources in the CCNM may not be adequate to effectively protect resources or highlight resource values. Inconsistent or nonexistent information may result in unnecessary disturbance of CCNM resources.

## Management Options

The following management options are proposed.

**Research.** BLM could develop geographic information systems (GIS) maps and a database of the current public access points adjoining the CCNM. The database could include information on the jurisdiction of the area, the point of contact, amenities in the vicinity, the types of activities that occur (as pertains to the CCNM), annual use numbers, existing interpretation facilities, and regulations relevant to the CCNM.

**Protection.** BLM could implement seasonal restrictions on public access to keep people from disturbing nesting seabirds and pupping marine mammals. Seasonal closure of sites with sensitive natural resources affected by recreational or commercial activities could also be implemented.

**Education.** BLM could develop educational materials and strategies (e.g., brochures, web sites, onsite exhibits, and equipment decals) in coordination with DPR, NPS, DFG, national marine sanctuaries, and other jurisdictions to encourage responsible use and compliance with restrictions on recreational and other coastal activities.

Also, BLM could establish a CCNM branding and signing program to increase public visibility of the monument and monument access points.

**Planning.** BLM could provide pass-through operational funds to partnering entities with the most coastal public access presence in that region to manage the day-to-day operation and management of the monument in that area. BLM could retain ownership of the monument and provide a small staff of resource specialists to develop statewide management guidelines, create interpretive materials, and monitor operational commitments. Specifically, BLM could establish cooperative agreements with entities that manage public access points adjoining the CCNM regarding:

- joint enforcement of CCNM and public access point guidelines and regulations;

- inclusion of CCNM educational and regulatory information in agency publications;

- dissemination of CCNM educational materials and posting of directional signs at key locations;

- accommodation of BLM staff and volunteers to conduct interpretive programs within the boundaries of the access point or to depart from the access point;

- training of permanent and seasonal agency staff on the subject of the CCNM; and

- where possible, development of compatible regulations and outreach materials that communicate consistent messages.

**Staffing.** To address additional research needs, inventory, monitoring, and adaptive management goals, and coordination efforts, BLM could implement one or more of the following options.

Fund a CCNM office with resource specialists (partnerships, interpretation, cultural resources, natural resources, law enforcement) to provide oversight and guidance in their areas of expertise. Work with coastal partners to provide office space for regional outreach coordinators who would be responsible for day-to-day coordination among partnering entities, communities, and businesses within the region, and who would train staff, disseminate educational materials, post exhibits and directional signs, and monitor use.

Establish CCNM access and information points along the coast. Using areas such as the Piedras Blancas and Point Arena Light Stations as examples, identify other key locations where opportunities for visitor access to the CCNM merit the development of information centers. These centers could be located in store-front offices in local communities, in shared space owned by a partnering agency, or at access points acquired by the agency. BLM staff could operate these offices and establish volunteer corps to assist with public outreach. Resource management and enforcement responsibilities would be directed to each office, with a coast-wide coordinator monitoring consistency among offices.

## Climate and Air Quality

### Description of Resource

Climate along the California coastline is a function of latitude and local weather patterns. In general, the coastline climate is temperate, with marine influences curbing temperature extremes.

Because coastal winds tend to disperse airborne pollutants, air quality is not considered to be a major factor affecting the resources of the CCNM. However, global climatic change resulting from the burning of fossil fuels and other long-term human activities could result in changes in the ocean level, with effects on the CCNM, as discussed below.

### Present Management Situation

BLM does not manage climate conditions or air quality in the CCNM. The California Air Resources Board (ARB) regulates release of pollutants into the air through the federal Clean Air Act of 1970. The Clean Air Act, in conjunction with international treaty, also addresses the burning of fossil fuels. In California, regional air quality management districts boards issue permits and collect fees for pollution generation in their jurisdictions.



## Anticipated Future Conditions

Because the human population is growing and is expected to use more fossil fuels, most atmospheric scientists believe that the global temperature will rise, possibly enough to melt some glaciers and cause a rise in sea levels worldwide.

If a rise in sea levels occurs, the CCONM will be affected both biologically and geologically. Rising sea levels might inundate some rocks and islands so that they are no longer accessible or beneficial to species such as migratory birds and pinnipeds. Rising sea levels might also create new rocks or islands, as features currently connected to the mainland become separated by water.

## Management Options

Because the timing and extent of sea level rise is unknown, no air quality or climate-related management measures are recommended. In the future, BLM could craft an adaptive management response to changing climate conditions, based on observed changes in sea levels.

## Cultural Resources

### Description of Resource

California's offshore rocks and islands were used by humans as early as 13,000 years BP (Moratto 1984). Humans have used these resources as temporary landing areas, resource procurement locations, habitation sites, and landmarks for both offshore and onshore navigation. They also may be regarded as traditional cultural properties (TCPs) by the descendants of Native Californian groups in whose ceremonies and mythologies they feature prominently.

TCPs are sites or locations that embody the beliefs, customs, and practices of a living community of people that have been passed down through generations, usually orally or through practice (NPS 1990). For many of these groups, offshore rocks and islands play an important role in mythology and cosmology, and may include burial grounds or meeting areas. Offshore rocks and islands also have served, and continue to serve, as traditional resource procurement areas (Kroeber 1925; Loeb 1926; McLendon and Oswalt 1978).

The historic record indicates that Europeans and Euro-Americans also used offshore rocks and islands for multiple purposes. Early European explorers' crews hunted sea lions and birds along the northern California coast. Later, the Spanish and Russians hunted on the offshore rocks and docked or anchored their ships there. In the 19th and 20th centuries, offshore rocks were used as landings in the logging and mining industries. Some of the offshore rocks and islands were the sites of navigational aids, such as lighthouses. Numerous shipwrecks,

many of which are still present on some offshore rocks, are also part of the history of these features (Del Cioppo 1983).

BLM has issued a contract to collect additional data regarding the cultural resources found on the CCNM; however, that effort is not yet complete, and the data are not yet available.

## Present Management Situation

Federal laws and regulations have been established to protect the nation's historic properties and Native American cultural resources. The following discussion identifies laws and regulations that pertain to historic preservation within the CCNM. BLM is required to consider both the short- and long-term management of cultural resources on public lands under Sections 106 and 110 of the National Historic Preservation Act (NHPA), under Section 14 of the Archaeological Resources Protection Act (ARPA), under BLM's national Programmatic Agreement with the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (SHPOs), and under BLM's state Protocol Agreement with the California State Historic Preservation Officer. In addition, an up-to-date inventory of cultural resources is an important part of the planning requirements of the Federal Land Policy and Management Act (FLPMA). Finally, BLM is required to protect and preserve Native American cultural values under the American Indian Religious Freedom Act (AIRFA) of 1978, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, and the "Indian Sacred Sites" Executive Order No. 13007 of 1996. Each BLM field office is required to designate a Native American liaison who is in charge of consultations with tribes and other Native American compliance issues.

## Anticipated Future Conditions

Four primary future conditions have the potential to affect cultural resources in the CCNM:

1. Natural erosion will continue on offshore rocks and islands, disturbing or eliminating the remnants of human activity.
2. Increased human use of the CCNM is likely to occur. Activities with negative effects on cultural sites may include recreational use, habitat restoration, and looting of archaeological sites. Illegal disturbances of cultural sites would be the indirect result of unrestricted access.
3. Marine wildlife management programs currently in effect in coastal regions are likely to increase marine mammal populations (e.g., seals, sea lions), whose behavior may adversely affect cultural sites.

4. Given recent legislation protecting Native American cultural values (AIRFA, NAGPRA), it is anticipated that TCPs, including offshore TCPs, will be increasingly recognized and used by Native Americans.

## Management Options

Section 110 of the NHPA, as amended, stipulates that each federal agency shall establish a preservation program for the identification, evaluation, nomination to the National Register of Historic Places (NRHP), and protection of historic properties. The following management options should be considered in the CCNM RMP.

**Research.** To comply with Section 110, management should develop a program to document significant archaeological sites and evaluate known historic resources in the CCNM. It is not known how many prehistoric archaeological sites, historic archaeological sites, and TCPs are located within the CCNM. An archaeological records search has turned up the presence of a few offshore sites, but this should not be considered a complete database of offshore cultural resources. The following tasks address those data gaps.

Complete and integrate the review of records in collaboration with the California Historical Resources Information System (CHRIS) in order to compile an inventory of all known prehistoric, protohistoric, and historic archaeological sites in the CCNM. Additionally, a collaborative partnership with Channel Islands National Park could provide information to aid in predictive modeling of archaeological resources that may be present in the CCNM.

Research historical archives and documents, and consult local historians and historical societies to better understand how the offshore rocks and islands were used in the past. Attempt to identify additional and more specific cultural uses of offshore rocks, and determine which rocks or islands are highly sensitive for the presence of archaeological sites and historic resources.

Research TCPs by reviewing available ethnographic literature on Native Californian groups along the California coast. Collaborate with entities that may have information on potential TCPs, such as the California Native American Heritage Commission (NAHC). Partner with federally and non-federally recognized Native American groups that may ascribe traditional cultural values to offshore rocks and islands, and encourage these groups or individuals to become stewards of locations identified as culturally valuable. Identification of ethnographic resources and TCPs, interpretation of Native Californian culture and traditions, and protection and adaptive use of historic structures could be accomplished through these relationships. A partnership agreement has already been completed with the Trinidad Ranchería; this type of relationship is desirable for groups who have traditional ties to coastal areas, such as the Chumash, the Smith River Ranchería, and the Yurok.

Professors, graduate students, and research associates of both the University of California and the California State University systems conduct anthropological research off California's mainland. For example, the Cotsen Institute of Archaeology at the University of California, Los Angeles (UCLA) sponsors archaeological research on the Channel and Farallon Islands, and the UC Davis Bodega Bay Marine Laboratory sponsors research related to Coast Miwok intertidal resource procurement. Partnering with academic institutions to facilitate and encourage research opportunities will help to fill cultural resource data gaps within the CCNM.

**Protection.** The CCNM may need future management in order to protect and preserve historic properties within the monument. Limits on access to the majority of offshore islands, rocks, and pinnacles will help to minimize potential negative effects on cultural resources within the CCNM. Because little is known of the location and condition of sites and TCPs within the monument, any protective measures will be adaptive (i.e., responding to data obtained through research activities). Direct control of access to known sites may be best enforced by resource-specific agreements with DFG, NPS, DPR, and local municipalities.

**Education.** Opportunities for education and interpretation of historic properties and TCPs can be accomplished through cooperation with DPR and through area-specific cooperative agreements with local entities. For example, the Santa Barbara Museum of Natural History, the Central Coast Museum Consortium, the Santa Barbara Maritime Museum, and local Chumash groups are possible partners that can inform and collaborate with CCNM to develop education and interpretation projects focusing on prehistoric and historic offshore activities along the Central Coast of California.

**Planning.** The CCNM could partner with NPS and DPR to create an integrated, long-term Cultural Resources Management Plan (CRMP). The CRMP would provide the basis for developing a programmatic agreement for phased management of the CCNM, including processes for inventory and evaluation, and for research and education opportunities. The programmatic agreement would be a legally acceptable compliance procedure implemented in consultation with the California SHPO and the ACHP.

As discussed above, partnering with academic institutions provides the best opportunities for the facilitation of anthropological research on the CCNM. Additionally, museums offer the best opportunities for developing cooperative cultural resources education and interpretive programs.

The CCNM could cooperate with DPR, various maritime museums in California, local historical societies, and MMS to develop a "Shipwreck Trail" of known shipwrecks within the CCNM.

CCNM could establish a program of government-to-government consultation with interested Native American tribes. Involving tribal

governments and the SHPO closely at the outset of planning would greatly facilitate coordination and consultation at later stages of planning and management of local rocks and islands of interest to these tribes. Additionally, partnering with the NAHC could help to develop relationships with non-federally recognized Native American groups who may have an interest in stewardship of offshore traditional cultural properties.

CCNM could partner with the federal and state agencies responsible for managing the large islands within the monument area that are not included in the CCNM, but which possess smaller offshore islands and rocks that are in the CCNM. These agencies include the U.S. Department of Defense (various military bases), the NPS, and DPR.

Local counties and municipalities could become stewards of specific portions of the monument, partnering with CCNM to undertake particular management responsibilities of their local rocks, islands, pinnacles, and reefs that lie within the CCNM.

## Education/Interpretation

### Description of Resource

For the purposes of this MSA, “education/interpretation” refers to the use of guided tours, public outreach programs, wayside and visitor center exhibits, brochures, newsletters and other print media, and web sites that provide information to people visiting the CCNM, planning a trip, or simply interested in learning about the monument.

There is currently no comprehensive information documenting the extent, type, or consistency of educational resources available in the CCNM area. It is likely that the information provided to the public communicates different messages about the value of CCNM resources and how people can minimize impacts.

### Present Management Situation

Although BLM administers a handful of lands on the California coast, including the Lost Coast Headlands, the Piedras Blancas Lighthouse, and the King Range National Conservation Area, almost all publicly owned access areas along the California coast are in non-BLM jurisdictions. The management and control of recreational access, and therefore of onsite educational messages about the CCNM, depend on cooperation among the entities and individual land managers that oversee these access points. The diversity of jurisdictions, large number of unstaffed access points, limited operational budgets, and divergent management priorities hamper current public outreach efforts.

## Anticipated Future Conditions

Visitors will find and access the CCNM with or without educational materials. Without such materials, however, visitors will not know how to tailor their activities to be sensitive to the CCNM's resources and they will be more likely to cause adverse effects. Wildlife may be driven away from resting, birthing, and nursing areas; plant communities and paleontological or cultural resources may be disturbed or destroyed.

## Management Options

Education is a management tool that can guide and direct appropriate use of the CCNM resources. It can serve to market and promote visitation to the monument and assist coastal communities in building local economies tied to nature and recreational tourism. Educational programs and materials could be used to align BLM's management priorities and operational goals. The following options are proposed.

**Research.** BLM could develop GIS maps and a database of the current recreational access points adjoining the CCNM. The database could include information on the jurisdiction of the area, the point of contact, recreational amenities in the vicinity, the types of recreational activities that occur (as pertains to the CCNM), annual use numbers, existing interpretation facilities, and regulations relevant to the CCNM.

To allow establishment of buffer zones, BLM could conduct research to determine the minimum flushing distances, specific to different recreational activities, of each species of pinniped and nesting seabird.

Finally, BLM could gather and monitor coastal tourism expenditure data.

**Protection.** BLM could implement seasonal restrictions on public access to keep people from disturbing nesting seabirds and pupping marine mammals. Seasonal closure of sites with sensitive natural resources affected by recreational or commercial activities could also be implemented.

**Education.** BLM could develop educational materials and strategies (e.g., brochures, web sites, onsite exhibits, and equipment decals) in coordination with DPR, DFG, national marine sanctuaries, and other jurisdictions to encourage responsible use and compliance with restrictions on recreational activities.

**Planning.** BLM could provide pass-through operational funds to partnering entities with the most coastal public access presence in that region to manage the day-to-day operation and management of the monument in that area. BLM would retain ownership of the monument and would provide a small staff of resource specialists to develop statewide management guidelines, create interpretive materials, and monitor operational commitments.

Specifically, BLM could establish cooperative agreements with entities that manage public access points adjoining the CCNM regarding:

- joint enforcement of CCNM and public access point guidelines and regulations;

- inclusion of CCNM educational and regulatory information in agency publications;

- dissemination of CCNM educational materials and posting of directional signs at key locations;

- accommodation of BLM staff and volunteers to conduct interpretive programs within the boundaries of the access point or to depart from the access point;

- training of permanent and seasonal agency staff on the subject of the CCNM; and

- where possible, development of compatible regulations and outreach materials that communicated consistent messages.

**Infrastructure Construction.** To address additional research needs, adaptive management goals, and coordination efforts, BLM could implement one or more of the following options.

- Fund a CCNM state office with resource specialists (partnerships, interpretation, cultural resources, natural resources, law enforcement) to provide oversight and guidance in their areas of expertise. Work with coastal partners to provide office space for district outreach coordinators, who would be responsible for day-to-day coordination among partnering entities, communities, and businesses within the district, and who would train staff, disseminate educational materials, post exhibits and directional signs, and monitor use.

- Establish CCNM access and information points along the coast. Using areas such as the Piedras Blancas and Point Arena Light Stations as examples, identify other key locations where coastal access to the CCNM merits the development of information centers. These centers could be located in store-front offices in local communities, in shared space owned by a partnering agency, or at access points acquired by the agency. BLM staff could operate these offices and establish volunteer corps to assist with public outreach. Resource management and enforcement responsibilities would be directed to each office, with a statewide coordinator monitoring consistency among offices.

## Environmental Justice

### Description of Resource

“Environmental justice” is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the

development, implementation, and enforcement of environmental laws, regulations, and policies. As part of compliance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, the different types of access and uses of the CCNM have been analyzed to determine whether management of the CCNM presents any environmental justice issues.

## **Consumption of Marine Life**

Various minority populations, low-income communities, and tribes in California depend on marine life as an important component of their diets. People collect seaweed, invertebrates, and fish from coastal waters. Abalone, in particular, is often taken from coastal areas in California and consumed. While only a small amount of marine life is collected from the CCNM, the monument represents an important resource to these disadvantaged communities.

## **Spiritual/Cultural Appreciation**

Some lands in California are considered to have cultural/spiritual significance to certain segments of the population and to tribal communities in particular. It is likely that portions of the CCNM have such significance to various social groups.

## **Recreation**

As mentioned in other sections of this report, recreation is an important CCNM resource. California is a large state, and only 15 of its 58 counties include coastline. Because recreation and relaxation at coastal areas is a resource that people from all over California enjoy, access points for coastal areas are provided for visitors who live inland. Access points that are located near public transit stations allow visitors with limited transportation options to more easily enjoy the monument.

## **Education/Outreach**

The CCNM contains unique habitat and resources with educational value. Educational opportunities are provided for Californians who do not live in proximity to the coast. As mentioned above, proximity to public transit is a characteristic of educational facilities that affects access for disadvantaged communities. Availability of educational materials in languages other than English, too, improves access for members of some minority groups.



## Present Management Situation

BLM's Instruction Memorandum No. 2002-164, May 7, 2002 (BLM 2002), addresses environmental justice and includes the following directives. BLM employees should:

- consider the impacts of actions and inactions on minority populations, low-income communities, and tribes;

- analyze and evaluate the equity of the distribution of benefits and risks of BLM decisions; and

- actively seek the participation of affected minority communities and groups.

Much of the collection and consumption of marine life (e.g., seaweed) from the California coast is illicit. Various regulations regarding hunting, fishing, and poaching exist in California and apply to coastal areas. However, enforcement of these regulations on the lands that are now part of the CCNM has historically been irregular and lax. Under the Presidential Proclamation that established the CCNM, removal of resources from the CCNM is prohibited; but strict enforcement of this prohibition may result in a disproportionate impact on minority communities.

Access to monument lands with cultural significance has not been specifically addressed by BLM. Efforts to facilitate access to such lands are not currently being undertaken. It is not known which, if any, rocks have significance to tribal communities.

Recreation access management is multimodal and has included designing bus routes to provide access to the coastline from inland areas; maintaining roads and parking lots for public use; and implementing fee schedules that minimize costs to low-income visitors. No policies specifically address maximizing access opportunities for minority populations, low-income communities, or tribes.

Educational facilities have been designed to encourage participation by a wide array of visitors. Language barriers have been taken into consideration when possible. However, there are currently no specific directives that address the environmental justice aspects of access to the educational facets of the CCNM or of BLM lands in general.

## Anticipated Future Conditions

The continuing movement of economically and socially disadvantaged populations into California is likely to increase probability of environmental justice issues being associated with management of the CCNM.

## Management Options

The following management options are proposed.

**Research.** Additional research in the following areas is needed:

- the regions, specific locations, and quantities of marine life being collected from the CCNM for staple food by California's minority and low-income populations;

- the locations of lands with spiritual or cultural significance to Native American tribal communities;

- the extent to which access to the coast is difficult for minority and low-income populations;

- the extent to which access to CCNM educational facilities would be difficult for minority and low-income populations (this topic would require an evaluation of facility placement and language use); and

- the extent to which various management strategies would cause disproportionate impacts on minority, low-income, or tribal communities.

**Protection.** In deciding whether to restrict access to coastal areas and which areas to restrict, BLM could consider whether those decisions would eliminate or reduce a food source for minority and low-income populations, or restrict access to culturally significant lands of Native American groups. Regulation of marine life collection is also a factor. While BLM cannot ignore state regulations on collection of marine species, it must also be sensitive to Native American cultural sites and other minority groups' uses of marine resources. Therefore, BLM could work with tribes and minority or low-income communities to identify the most important food collection locations or culturally significant sites in the CCNM and consider these data when setting access restrictions. BLM, at its discretion, could also issue easements to disadvantaged communities for use of CCNM resources where a historical pattern of use exists.

BLM can continue to maintain access roads and parking lots, minimize or eliminate access fees, and work with transit companies to encourage affordable and convenient transportation from inland areas, especially large urban areas in fairly close proximity to the coast (e.g., Los Angeles, San Jose, and Oakland).

BLM can continue to consider minority communities and low-income populations in facility/signage location and design.

**Planning.** A more specific and comprehensive set of environmental justice management policies could be written and incorporated into BLM management practices. Such a set of policies would include acknowledgement of the environmental justice issues inherent in routine or semi-routine BLM decisions. Pertinent decisions would involve the design

and location of facilities and access routes, the design of signage, and the delineation of restricted areas.

Also, BLM could ensure that its policies and decisions were consistent with local and state environmental justice policies and ordinances.

## **Facilities and Infrastructure**

### **Description of Resource**

Most of the modest demand for facilities and infrastructure in the CCNM relates to navigation markers and landside developments that are outside the CCNM boundaries, such as access routes for visitors, parking/viewing areas, and public facilities associated with state parks along the coast. The CCNM itself, like many lands administered by BLM, is subject to very little demand for expanding public facilities or infrastructure.

### **Present Management Situation**

BLM, DFG, and DPR serve as the core managing partners of the CCNM. Through an interim MOU signed in 2000, these three agencies are responsible for the day-to-day CCNM management. In particular, DPR manages state park facilities and parking lots along the coast adjacent to the CCNM. Other entities with coastal land holdings, identified in the Lands and Realty section, also provide facilities and infrastructure near the CCNM. In addition, BLM has right-of-way regulations to address minor infrastructure that does not warrant major corridor designation. BLM itself owns very few visitor facilities adjacent to the CCNM. These include the King Range National Conservation Area, which supports backpacking trails; community and visitor use of the Cape Mendocino Lighthouse; and the Piedras Blancas Light Station, of which BLM currently provides once-a-month tours (managed by the Bakersfield Field Office).

### **Anticipated Future Conditions**

The nature of the CCNM does not support major infrastructure expansion; however, maintenance of existing facilities associated with the CCNM will continue to be administered through close coordination between BLM and DPR, as well as by other entities with jurisdictions adjacent to the monument.

## Management Options

The following management options are proposed.

**Research.** BLM could conduct an inventory of the existing facilities and infrastructure associated with the CCNM, including those located within the monument itself (e.g., aids to navigation) and landside facilities outside BLM jurisdiction (e.g., state parks). Using this information, BLM could determine whether existing areas/routes are necessary and where new facilities would be desirable, and could develop priorities for infrastructure maintenance and development. Also, BLM could manage demand for new infrastructure by anticipating trends in recreational use and implementing programs and policies to focus and manage those uses.

**Protection.** Based on the above research program, BLM could engage in activities to maintain existing facilities and develop new ones. While opportunities may be limited within the CCNM itself, BLM coastal land holdings such as those near Piedras Blancas hold more promise. In addition, BLM could develop cooperative programs with its core partner DPR, as well as other coastal entities, to provide funding and/or guidance on facility and infrastructure maintenance and development.

**Planning.** BLM could continue to manage the facilities and infrastructure associated with the CCNM through close coordination with its core partners and field offices. BLM could coordinate with DPR to link interpretive sites at the CCNM with existing and new access infrastructure, interpretive centers, and other public facilities managed by DPR.

The CCNM also intersects municipalities and public reserves. These entities could also be included in coordinating the development of interpretative centers. Areas with potential include the coastal park in the City of Laguna Beach, parks and other coastal facilities owned or operated by other cities and counties, California Department of Transportation (Caltrans) facilities (discussed below), and Vandenberg Air Force Base.

Each area of the CCNM should be analyzed to determine how to effectively manage facilities and infrastructure with consideration given to educational and other programs associated with the monument.

Finally, BLM could partner with Caltrans in their Scenic Highway Program. This partnership could include public access/viewing opportunities along with public information centers.

# Geology, Topography, and Soil Resources

## Description of Resource

### Geology and Topography

Because of the spatial extent and variable conditions of the monument, the CCONM comprises a wide variety of geologic and topographic features. The greater part of the monument, from approximately Point Conception in Santa Barbara County north to the Oregon border, is located within the Coast Ranges geomorphic province, which is characterized by sedimentary strata with a terraced, uplifted, and wave-cut coastline. A granitic core, extending from the southern extremity of the Coast Ranges to north of the Farallon Islands, is found in this region west of the San Andreas Fault. South of Point Conception, the coastline enters the Transverse Range geomorphic province, characterized by an east-west mountain structure that extends offshore. The majority of the coastal rocks in this province are of marine and non-marine sedimentary origin. South of this, the monument enters the Peninsular Range geomorphic province that is dominated by marine and non-marine sedimentary rocks along the coast and granitic rocks inland. Numerous faults are found offshore and nearshore in the vicinity of the CCONM. The San Andreas is the predominant fault system extending through most of California and enters the Pacific Ocean south of the San Francisco Bay.

Geologic features found in the monument have either of two basic formative histories: (1) Tectonic and volcanic activity—generate uplifts that formed some of the larger islands off of the coast, including the Farallon and Channel Islands. Rocks and islands offshore of these islands, as well as some nearshore CCONM features, share this history. (2) Other nearshore rocks and islands are sedimentary in formation, the result of deposition of geologic material over time. In the case of (2), tectonic activity and faulting may have cleaved or uplifted these sedimentary rocks from the mainland and so tectonic activity plays a role in both formative histories.

Multiple physical factors lead to the formation and dissolution of the rocks and islands within the monument, including the erodibility of the geologic material and the extent of tectonic forces and wave, wind, and tidal action. As such, the rocks and islands off of the California coast are dynamic; certain rocks and islands will eventually be eroded below mean high tide, while other areas currently attached to the shoreline will become separated from the coast. Where wave forces are strong, offshore formations tend to be rocky, whereas in areas with lower wave energy, sandy areas and beaches may form. In general, north of Point Conception, strong waves and wind have caused numerous rocks and cliffs to form. To the south, the buffering effect of the Channel Islands and the Southern California Bight, an indentation and southeasterly shift in the coastline south of Point Conception, reduces the impact of storm waves; and rocks and islands tend to be fewer and more sandy.

From Cape Vizcaíno in Mendocino County south to San Diego, the California coast comprises a discontinuous series of narrow, flat-lying marine terraces. Gradual erosion has created a relatively shallow submerged continental shelf offshore. This shelf varies in width but is often no more than 4 or 5 miles wide and is often etched by submarine canyons. Many of the rocks and islands found on the continental shelf are remnants of mainland areas that were exposed by tectonic uplift.

Because of their isolation, individual monument features may act as representatives of certain geologic formation types and/or as “benchmarks” for particular geologic processes. These features may have special interpretive value to coastal geologic research.

Nearshore CCNM features may be adversely affected by human-induced sedimentation and erosion, which may alter geomorphologic processes on the monument. California’s coastal beaches, wetlands, and watersheds have been significantly affected by extensive human alteration of the natural flow of sediment to and along the coast. Some watersheds no longer provide a sufficient supply of sediment to beaches; in other areas, wetlands are compromised due to too much sedimentation, and beaches can erode due to lack of sand. The extent to which this alteration of natural processes has affected geomorphology of the CCNM is unknown.

## Soils

A small number of the rocks and islands, mainly concentrated in the northern portion of the coast, have native soils that support vegetation. These soils were likely formed under three conditions: (1) soil formation may have occurred on the rocks in-situ; (2) for rocks and islands that were once a part of the mainland, soil formation may have occurred while the islands were still attached to the mainland; and (3) some combination of the above. In all cases, these soils may have research and interpretive interest as they may represent unique soil types, examples of pedogenesis (soil formation), or pristine examples of soils currently or historically found on the shoreline.

## Data Availability

While California coastal geology has been extensively studied and many publications reference the onshore coastal geology of California, no evidence has been found that the geomorphology, geology, topography, or soil resources of the CCNM have been inventoried in a systematic way—including those resources that may be unique or economically significant. Similarly, no direct information has been found describing the presence or absence of Pleistocene sediments, and site-specific soil surveys have not been conducted for the CCNM (Stanisewski pers. comm.). Because many of the rocks and islands are extremely small, they are generally not represented on geologic maps and soil surveys.

Previous study has focused on onshore and subsurface formations; consequently, limited information is available for the CCNM. Because many of the offshore rocks share formative histories or are relicts of onshore formations, characteristics may be inferred from onshore features. Some site-specific exceptions exist where research has been conducted, such as at Morro Rock, which has been the subject of several studies.

General information on the geology, topography, and soils of the California coast is available from a variety of sources, including USGS, the California Geological Survey (1:250,000 mapping series), and the Natural Resources Conservation Service (NRCS), as well as numerous large-scale mapping efforts conducted by state and federal government and university researchers. In addition, a soil survey is currently being completed for the Channel Islands. A comprehensive listing of sources of information is available at the California Resources Agency's Ceres web site (<<http://www.ceres.ca.gov>>). At present, it is unclear whether information available from state and federal government documents is adequate to infer the general geology, topography, and soils of the CCNM.

Additional research is needed to identify both the general and the site-specific geology, topography, and soils of each rock and island. Direct and inferential information regarding these resources could be used to identify whether the CCNM might support habitat for certain bird and plant species and can indicate whether cultural resources, fossils, and certain plant communities may be present. Further research would also identify where the geology, topography, and soils of the CCNM may provide subjects for interpretation (e.g., visitor centers, interpretive signs, and other education) on state park lands and other public lands along the coast of California.

## Present Management Situation

There are currently no regulations or management policies governing the geology, topography, or soil resources of the CCNM. Under the Presidential Proclamation establishing the CCNM, the CCNM is removed from mineral mining activity, exploration, and research, as well as from appropriation, injury, destruction, and removal of monument features.

Coastal erosion issues are currently being addressed by the California Coastal Sediment Management Workgroup, a consortium of multiple federal, state, and non-profit agencies including the state Department of Boating and Waterways, DFG, DPR, the California Coastal Commission, the California State Lands Commission, the California Coastal Conservancy, the Corps, USGS, and the California Coastal Coalition. This group is currently preparing a California Coastal Sediment Management Master Plan and has developed a National Regional Sediment Management Demonstration Program (California Coastal Sediment Management Workgroup 2002).

## Anticipated Future Conditions

No significant changes (other than those caused by natural processes) in the geologic characteristics, soils, or topography of the CCNM are expected if current management strategies are carried into the future.

## Management Options

The following management options are proposed.

**Research.** A thorough review of the existing geologic, topographic, and soils literature for the coast could be conducted to identify rocks and islands that are considered unique or especially valuable to research and geologic interpretation. This review could seek both lithologic (i.e., the macroscopic nature of the mineral content, grain size, texture, and color of rocks) and geomorphologic information, because both would be valuable in making management decisions. This review could identify geologic resources worthy of future research or interpretation in concert with investigation of the CCNM's biological values. Information gained through research, such as soil and vegetation patterns, can assist in coastal restoration efforts on the mainland. Research may also aid in the preservation of habitat on the rocks and islands.

New research of the geologic, topographic, and soil resources at the CCNM could also be undertaken. As mentioned above, certain features at the CCNM could serve as benchmarks for geologic or soil processes, or as prime examples of unique or remnant formations. Such research could be performed by BLM or through cooperative arrangements and funding with other organizations. In particular, USGS has signed an MOU with BLM to facilitate research activities nationally. Similar cooperative arrangements could be formed with the NRCS, which performs soil surveys. Other entities with which to collaborate could include NPS, DPR, and NOAA (all of which may have data relevant to their land holdings along the coast), as well as universities and other resource agencies. This effort could also be part of a larger research effort related to other aspects of the CCNM, such as paleontological or biological resources. Further evaluation would be necessary to identify the most promising collaboration opportunities.

**Protection.** The CCNM may need future management to preserve important geologic features, topography, and soil resources. Because detailed information is not available regarding much of the resources found in the CCNM, much of this management would need to be adaptive (i.e., responsive to the data gained through research activities).

The rocks and islands may need to be protected from human-induced erosion to preserve soils that support unique vegetation types and habitat found only on the CCNM. Many of these vegetation types have been eliminated from



the mainland through human disturbance. As such, use or access restrictions may be appropriate in portions of the coast.

**Education.** The geology, topography, and soils of the monument could serve as excellent resources for interpretation and education at specific areas along the coast. Subjects for interpretation could include geologic history, including volcanic, plate tectonic, sedimentary, deposition, and erosion processes; areas where geologic and/or soil features support habitat for vegetation and wildlife; and identification of unique features such as remnants of coastal features. One prime area identified for such interpretation is the Goat Rock section of the Sonoma Coast State Beach, which provides a panoramic view of offshore formations with various natural histories and characteristics. Other identified portals may also serve as excellent interpretation sites, including Piedras Blancas and Point Arena Light Stations, as well as other existing holdings, facilities, and interpretive sites managed by DPR, NOAA, or other coastal entities.

Various levels of agency cooperation may be possible as part of this effort. Promising avenues for cooperative agreements and funding exist for entities with coastal access in the vicinity of the CCONM, including those identified above; regional, county, and city parks; and private entities. BLM could also use its own coastal land holdings, such as the King Range National Conservation Area, to host interpretive facilities, although this may not be as feasible given the primitive character that is being maintained at this area.

**Planning.** The CCONM management should coordinate with other plans along the coast that address geologic and soil resources, including general plans and local coastal plans, and the California Coastal Sediment Management Master Plan.

## Hazardous Materials

### Description of Resource

At present, no hazardous materials are known to exist in or on the CCONM. The lands are not used as storage areas for hazardous materials or hazardous waste, and the deposit of such items on the monument is illegal. The accidental or intentional release of hazardous materials on monument lands, however, is a possibility. Oil spills, in particular, are a possibility that BLM is aware of and wishes to be prepared for. Activities leading to potential oil spills, as well as various other hazardous materials, have been discussed under Minerals and Energy Programs and Water Resources. A map and timeline of oil spills off the California coast was not available for inclusion in this report; the existence of such data is still being researched.

## Present Management Situation

BLM has a contingency plan in place to provide guidance in the case of an oil spill or hazardous substance release. This plan was evaluated and the findings presented in BLM Work Plan for EOI Emergency Preparedness & Response Strategy—Oil Discharge & Hazardous Substance Releases (Work Plan) (BLM Protection and Response Group 2002). The Work Plan identified gaps within BLM contingency plans and provided recommendations to address them.

Within the coastal waters of California, EPA regulates ocean disposal sites for dredge material, and mineral extraction activities are managed by the State of California within 3 miles of the coast and by MMS between 3 and 12 miles off the coast. Hazardous materials associated with mineral extraction are managed by the state Office of Oil Spill Prevention and Response and MMS' Environmental Division within their respective jurisdictions.

There is a permanent moratorium on new offshore oil and gas leases in California state waters and a moratorium on new leases in federal waters until 2012. Development on existing leases in both federal and state water, however, is not affected and may still occur within offshore areas that were leased prior to the implementation of the aforementioned restrictions (California Resources Agency 1999).

## Anticipated Future Conditions

The likelihood of hazardous dumping is not expected to change substantially in the near future. In the event that more sites along the California coast are opened for oil exploration or drilling, the probability of accidental release of oil into the coastal ecosystems will increase.

## Management Options

The following management options are proposed.

**Research.** As recommended by the Work Plan, BLM could hire a contractor to identify critical areas in need of protection within monument lands. BLM could also work with other agencies to ascertain the coastal areas that have historically proved most susceptible to hazardous spills.

Additionally, BLM could stay informed about the most advanced efforts in hazardous waste management, including oil spill cleanup methods. BLM could also work with DFG's OSPR Resource Assessment Program to assist with natural resource damage assessments and to stay informed about recent assessments.

**Protection.** BLM could adopt the recommendations put forth in the Work Plan, which would resolve various gaps in the current response plans and

ensure more cohesive and coordinated protection from oil spills and other hazardous material releases. During the process of incorporating these recommendations, BLM could work closely with OSPR and the DFG Ecoreserve, among other entities, to ensure that all coastal resources are equally provided for in one response plan or another and that no areas are inadvertently excluded.

One specific recommendation made in the Work Plan was to ensure emergency response training via classroom instruction (BLM Protection and Response Group 2002). This could include BLM personnel attendance at hazardous waste operations and emergency response (HAZWOPER) classes, as well as incident command spill response training as offered by DFG.

Another action that BLM could take to protect the monument from exposure to hazardous materials would be to participate in hazardous materials collection events hosted by local agencies, state agencies, and nonprofits.

**Education.** BLM could produce and post signage on BLM coastal sites warning readers about the dangers of polluting coastal ecosystems with hazardous materials. BLM could also provide funding or engage in cooperative agreements with its core partners and other entities with land holdings along the coast to post similar signage.

In addition, BLM could work with maritime businesses (including cruise lines and fisheries) and the oil industry to produce signage and literature about preventing and dealing with accidental hazardous discharges or spills.

Finally, BLM could work with USFWS and the OSPR on existing programs that aim to educate pilots of both aircraft and watercraft. (The OSPR is currently working on a human disturbance reduction program, initially focusing on private aviation and personal watercraft.)

**Planning.** As mentioned above, BLM could adopt the recommendations provided in the Work Plan. Specific recommendations regarding planning have included participating in external meetings and training with other agencies; reviewing the USCG's contingency plan; and hiring two full-time persons to work for the CCONM on spill planning, including intra-BLM coordination.

Groups with which BLM could coordinate include USFWS, USCG, and DFG's OSPR. In particular, a BLM representative could attend OSPR Wildlife Response Plan subcommittee meetings.

Also, BLM could investigate sources of funding for spill response preparedness programs, such as Superfund and the federal Oil Spill Liability Trust Fund (administered by the USCG's National Pollution Funds Center).

# Land Use Planning

## Description of Resource

The CCNM is federally owned and managed under the authority of BLM. The CCNM's rocks and islands are naturally occurring features, treated primarily as natural resources subject to minimal human contact; this use is not expected to change. On a limited basis, the rocks and islands are used for some human purposes, such as sites for navigational aids (e.g., lighthouses). Also, although not allowed or legal, some humans use the CCNM for recreation and as sites for harvesting invertebrates during low tides. Although BLM has authority over uses of the CCNM, the U.S. military has used some of the rocks and islands (e.g., near the Channel Islands) as locations for target practice.

Land use information about the CCNM is not centralized in any agency. The most comprehensive catalog of public coastal access characteristics is *The 1997 California Coastal Access Guide* (California Coastal Commission 1997). The California Coastal Commission has indicated its willingness to share information to support the CCNM management efforts and may be the best source for updated public access information. In addition, land use information may be obtained by examining general plans of the cities and counties along the coast and by viewing coastal aerial photographs, available at <http://www.californiacoastline.org>. A list of some known coastal permitting agencies and management plans is located in Chapter 2, Legal and Regulatory Context, although this list is by no means comprehensive.

Available information appears sufficient to assess land uses adjacent to the CCNM on a broad scale. If site-specific management actions are required, it may be necessary to visit specific locations adjacent to the CCNM to determine current land use conditions.

## Present Management Situation

Presently, special use permits are administered by BLM for land entry on the CCNM, although it is likely that many of the entities that regularly or occasionally access the CCNM are not aware of the need to obtain access permits from BLM. Additionally, BLM authorizes research on the CCNM; however, as with land entry permits, it is not known how many of the research entities along the coast are aware of the need to obtain permits from BLM before researchers access the rocks and islands.

Land uses on adjacent coastal property are controlled by a number of state, federal, and local entities. Each of these entities has its own land use plan and permitting process. There is currently no process to ensure that land use planning by BLM and adjacent government entities is consistent.

## Anticipated Future Conditions

With the current land use planning coordination in effect, it is likely that occasional inconsistencies between landward planning and BLM's CCNM planning will continue. There is currently inadequate BLM staff time available to coordinate its management actions with the multitude of planning entities along the California coast.

Currently, the Monterey Bay Marine Sanctuary, as part of its extensive planning update process, is working to identify a framework for a comprehensive multi-agency "Big Sur Coastal Ecosystem Action Plan," integrating resource protection, education and outreach, and research and monitoring activities specifically for the Big Sur Area. Involving the CCNM, this effort, if successful, could stand as a model for future integrated CCNM planning efforts.

## Management Options

The following management options are proposed.

**Research.** BLM could partner with the California Coastal Commission's program to collect and analyze the existing land use plans of all entities managing coastal lands, as well as those of entities managing the waters and ocean floor surrounding the CCNM. This effort could be used to identify land (and sea) use designations that could potentially conflict with CCNM objectives, especially those allowed uses that could adversely affect the sensitive biological and aesthetic resources of the monument, as well as potential planning and management partners.

**Planning and Protection.** To ensure the preservation of the CCNM's resources, BLM could actively work with its managing partners, collaborative partners, and stewards to jointly plan and manage land uses along the coast of California. An especially appropriate example would be a planning and management partnership between BLM and the USFS for the rocks, sea stacks, and small islands, adjacent to the Monterey Ranger District of the Los Padres National Forest—eight of which are currently under the jurisdiction of the USFS, at least one of which is in private ownership, and the rest of which are part of the CCNM. The three large sea stacks adjacent to Piedras Blancas Light Station (Piedra Blanca No. 1, Piedra Blanca No. 2, and Outer Islet), as well as La Cruz Rock located a few miles north of the light station, are owned by the Hearst Corporation and thus present a similar opportunity for enhancing a planning and management partnership between BLM and the Hearst Corporation.

This should not imply that ownership of offshore rocks is a requirement for planning and management partner status with BLM. Any agency or organization, whether it be federal, state, or local, with an interest in managing California's coastline could be a potential partner.

In addition to initiating and encouraging partnerships, BLM could clearly outline the process for permitting coastal land uses, including the protocol for administering special use permits that may be appropriate for the CCNM or adjacent lands.

BLM could closely review existing coastal management plans, in order to glean ideas as well as to ensure efficient coordination of resource management among agencies. Some areas in which coordination would be particularly useful include public safety, wildlife management, hazardous materials management, and research. (See the individual sections on each of these resources for further discussion.) Plans that may bear investigation during the RMP process include the National Marine Sanctuary Program's Joint Management Plan (currently undergoing revisions, with a revised edition scheduled for publication in summer 2004); the Oregon Coastal Management Program's Oregon Coastal Management Plan; and DFG's goals and guidelines for management of California's Marine Managed Areas, of which Marine Protected Areas are a subset.

## Lands and Realty

### Description of Resource

The proclamation that established the CCNM described the monument as "... all unappropriated or unreserved lands and interests in lands owned or controlled by the United States in the form of islands, rocks, exposed reefs, and pinnacles above mean high tide within 12 nautical miles of the shoreline of the State of California." Based on mapping data prepared by both the California State Lands Commission and MMS, BLM estimated in July 2000 that the CCNM could include roughly 11,507 rocks and small islands<sup>3</sup> totaling about 900 acres along 1,100 miles of the California coastline.

The CCNM overlaps on the jurisdiction of five BLM field offices, adjoins or borders on 10 California State Park district offices, 11 DFG Marine Division field offices, six NPS units, a variety of military properties (including Vandenberg Air Force Base and San Clemente and San Nicolas Islands), 15 California coastal counties, and dozens of municipalities. Portions of four National Marine Sanctuaries and the subsurface responsibilities of the MMS and the California State Lands Commission underlie the CCNM; as do the offshore, below high tide responsibilities of a number of local governmental entities (e.g., City of Pacific Grove and Crescent City Harbor District). Several other entities are also involved in property associated with the CCNM (e.g., The Nature

---

<sup>3</sup> This inventory enabled BLM to count rocks 4 square meters or larger (i.e., the exposed portion above mean high water). The count does not include rocks less than 4 square meters in size. It can be conservatively estimated that at least another 15,000 exposed rocks that are less than 4 square meters are within the jurisdiction of the CCNM. Therefore, the total number of rocks and small islands within the CCNM is more than 25,000 and could be as high as 40,000 individual rocks and small islands exposed above mean high water (the majority of which would be under 4 square meters in size).

Conservancy, private landowners, and USCG own property adjacent to the monument).

As mentioned above, the CCNM includes rocks, islands, exposed reefs, and pinnacles. Although many of the rock features immediately offshore of major islands are part of the CCNM, the CCNM does not include the major islands themselves (e.g., Santa Catalina and other Channel Islands, the Farallon Islands, and the islands of San Francisco Bay). Because of the vast amount of land protected as part of the CCNM, there is no comprehensive inventory of specific coastal features, and in many cases, exact property boundaries have not been defined for the CCNM.

Table 3 presents examples of islands not included in the CCNM because they have previously been appropriated or reserved.

In addition to the islands listed in Table 3, Orange County has a congressional withdrawal of all rocks off the coast of Orange County that are 2 acres or less and within 1 mile from the shore.

## Present Management Situation

As mentioned above, the CCNM involves five BLM field offices in its management and adjoins or borders the jurisdictions of 10 DPR district offices, 11 DFG Marine Division field offices, six NPS units, a variety of military properties, 15 California coastal counties, and dozens of municipalities. Each of these agencies has some jurisdiction within the CCNM; however, day-to-day management is the joint responsibility of BLM, DFG, and DPR. In managing the more than 880 acres of the CCNM, BLM provides for the acquisition, use, exchange, disposal, and adjustment of land resources; determines the boundaries of federal land; and maintains historic records of ownership transactions. Given the purpose for which the CCNM was established, land disposal actions are not anticipated to occur and land exchange options are unlikely. Land acquisition, however, will be the main realty focus of the CCNM. Each BLM field office is staffed with a realty specialist who will facilitate these transactions for the section of the coast administered by that office.

**Table 3.** Islands Not Included in the CCNM

Name	County	Ownership	Management
Alder Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Alm Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Anacapa Island (three islets)	Ventura	NPS	Channel Islands National Park
Ano Nuevo Island	San Mateo	State Parks	Ano Nuevo State Reserve; State purchased, originally was a Mexican Land Grant (Punta del Ano Nuevo)
Bird Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Bird Rock (Santa Catalina Island)	Los Angeles	Private	1.30-acre islet is for sale; conveyed out of federal ownership under Scrip patent (Patent No. 1026930); located north of Twin Harbor area of Santa Catalina Island
Cape Vizcaíno Islands 1, 2, and 3	Mendocino	Private	Unknown (cluster of islets north of Cape Vizcaíno); Patent No. 999436
Castle Rock	Del Norte	USFWS	Castle Rock National Wildlife Refuge
Castle Rock (South)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Cat Rock (Anacapa Island)	Ventura	NPS	Channel Islands National Park (Anacapa Island complex)
Channel Islands National Park Rocks and Islets	Santa Barbara and Ventura	NPS	Channel Islands National Park (all rocks and islands within 1 nautical mile of San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara Islands)



**Table 3.** Continued

Name	County	Ownership	Management
Deadman's Island	Los Angeles	Treasury Department	Dredged out of existence (Los Angeles Harbor project)
Duck Island	Marin	Private	Unknown (Tomales Bay); Homestead 1884 (Patent No. 1900)
Farallon Islands	San Francisco	YSFWS	Farallon Islands National Wildlife Refuge; reserved by Proclamation 2416 of 7/25/40 (Middle Island and North Farallon Island) and PLO 4671 of 6/23/69 (SE Farallon Island with rocks, heads, reefs and islands SE of Middle Farallon Island)
GGNRA rocks	San Francisco and Marin	NPS	Golden Gate National Recreation Area (all rocks, islands, and pinnacles within ¼ mile seaward zone); Public Law 92-589 (10/27/72)
Hog Island	Marin	Private	Unknown (Tomales Bay); cash entry 1878 (Patent No. 6273)
Hunter Rock	Del Norte	Smith River/ Indian Ranchería	Smith River/Indian Ranchería; withdrawn by EO 1495 (4/11/12)
La Cruz Rock	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])
Two Rocks in the vicinity of Laguna Beach	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35) (Most likely Seal Rock and Bird Rock)
Lighthouse Island	Del Norte	Del Norte County	Del Norte Historical Society (Battery Point Island); quitclaim deed (12/5/69) for "an historic monument" and "shall not be used for park or recreational purposes" (includes reversion clause)
Mendocino Island 1 and 2	Mendocino	Private (?)	Unknown (two islets on south side of the town of Mendocino)
Middle Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Morro Rock	San Luis Obispo	State Parks	Morro Bay State Park
NW Seal Rock	Del Norte	Del Norte County	Lease to St. George Reef Lighthouse Preservation Society
Orange County Rocks and Islands	Orange	BLM	Temporary withdrawal for public purposes all rocks, pinnacles, reefs, and islands of less than 2 acres within 1 mile of the coastline of Orange County (Act of Congress 2/18/31)
Outer islet	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])

**Table 3.** Continued

Name	County	Ownership	Management
Pelican Rock	Del Norte	Del Norte County	Crescent City Harbor District; conveyed to Del Norte County (Act of Congress 6/19/48) “for the purpose of a public wharf or...use in the reconstruction, maintenance, and operation of Crescent City Harbor
Piedra Blanca No. 1 and No. 2	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])
Plaskett Rock	Monterey	Private	Hearst Corporation (?) (Patent No.1056141, patented off as Valentine Scrip in 1932)
Point Lobos Rocks and Islets	Monterey	State Parks	Point Lobos State Reserve; Recreation and Public Purpose Act (Patent No. 1126429) (458 surveyed rocks and islets)
Point Reyes NS Rocks and Reefs	Marin	NPS	Point Reyes National Seashore (all rocks and reefs within ¼ mile zone offshore and parallel to mean high tide line along national seashore); Act of Congress (9/13/62) and NPS Order (10/20/72)
Preston Island	Del Norte	Private	Within Crescent City (connected to mainland); patented in 1918 (Patent No. 613075)
Prewitt Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act] )
Prince Island	Del Norte	Smith River Indian Ranchería	Smith River Indian Ranchería; referenced in EO 1495 (4/11/12) as being the same as Hunter Rock
Prince Island	Santa Barbara	U.S. Navy	MOU with NPS (Channel Islands National Park, off San Miguel Island)
Redwood National Park rocks and islets	Del Norte	NPS	Redwood National Park (all rocks and islands, and pinnacles within ¼ mile zone offshore of coastal section approximately between north end of Freshwater Lagoon and south end of Crescent City, including White, False Klamath, Wilson, and Sister Rocks); Public Law 90545, 82 Stat. 931 (10/2/68)
Round Rock	Del Norte	Crescent City Harbor District(?)	Crescent City Harbor District (?); withdrawn (4/30/48) for Department of Army by PLO 474 (under Rivers and Harbors Act of 1899)
St. George Reef	Del Norte	USCG	Withdrawn by EO (1/29/1867) for lighthouse purposes (all rocky islets off Point St. George)
San Clemente Island	Los Angeles	U.S. Navy	Naval Oceans Systems Facility
San Francisco Bay Islands	Various	Various	Various (reserved for military, lighthouse, and other purposes, including GGNRA)

**Table 3.** Continued

Name	County	Ownership	Management
San Juan Rocks	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35)
San Martin Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act) )
San Mateo Rocks	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35)
San Miguel Island	Santa Barbara	U.S. Navy	MOU with NPS (Channel Islands National Park)
San Nicholas Island	Ventura	U.S. Navy	Pacific Missile Range
Santa Barbara Island	Santa Barbara	NPS	Channel Islands National Park
Santa Catalina Island	Los Angeles	Private	Wrigley Corporation et al.
Santa Cruz Island	Santa Barbara	NPS and TNC	Channel Islands National Park and TNC preserve
Santa Rosa Island	Santa Barbara	NPS	Channel Islands National Park
Sea Lion Rock	Mendocino	Private	Stornetta Ranch (Pt. Arena area); IL 32 (in-lieu selection to State of California)
Sea Lion Rock	Monterey	Army	Fort Hunter Liggett (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation)
Sea Lion Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Sugarloaf Island	Humboldt	USCG	Withdrawal by EO (6/8/1866 and 5/23/1867) for lighthouse purposes
Villa Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)

**Table 3.** Continued

Name	County	Ownership	Management
Whaleboat Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Whaler Island	Del Norte	Crescent City Harbor District (?)	Crescent City Harbor District (?); patented on 6/17/36 (Patent No. 1084201) for use as anchor point and rock quarry for breakwater construction
Whaler's Island	San Luis Obispo	San Luis Bay Harbor District	San Luis Bay Harbor District; patented 5/5/65 (Patent No. 04-65-0301) for public park and fishing purposes only (with reversion clause)
White Rock No. 2	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)

## Notes:

BLM = U.S. Bureau of Land Management.  
 EO = Executive Order.  
 GGNRA = Golden Gate National Recreation Area.  
 MOU = Memorandum of understanding.  
 NPS = National Park Service.

PLO = Public Land Order.  
 TNC = The Nature Conservancy.  
 USCG = U.S. Coast Guard.  
 USFS = U.S. Forest Service.  
 USFWS = U.S. Fish and Wildlife Service.

All land acquisition actions and land exchanges will be conducted by a qualified appraiser. All acquisitions or exchanges must use the fair market value, as determined by a qualified appraiser. As of October 1, 2003, BLM will no longer have appraisers on staff. The appraisal function is being organized into a separate office within the U.S. Department of the Interior (DOI). When needed, the DOI appraisal office will be responsible for conducting an appraisal.

## Anticipated Future Conditions

The Pacific Gas and Electric Company currently has a right-of-way on Lion Rock offshore of Diablo Canyon. Other rights-of-way on lands within the CCNM may include water lines or communication sites. It is foreseeable that scientific study rights-of-way may also be granted within the CCNM in the future. The National Science Foundation is expected to fund research using seismic stations that may be located within the CCNM. However, because the area has been declared a national monument, it is very unlikely that BLM will be authorizing new rights-of-way or land disposals. Transfers of jurisdiction, acquisitions, or exchanges of rocks, islands, pinnacles, and exposed reefs may be considered (see Table 4). In addition, any unexposed coastal features that become exposed would automatically become a part of the CCNM. Pursuant to the Presidential Proclamation establishing the CCNM, any California coastal rocks, islands, pinnacles, or exposed reefs within the area of the CCNM and acquired by BLM will become part of the CCNM.

BLM's acquisitions, exchanges, and withdrawals are all based on resource management planning. For lands to be acquired, exchanged, or disposed of, they must be identified in a land use planning process. When withdrawals are proposed for revocation (e.g., for rocks and islands that were previously withdrawn and are, therefore, not currently within the CCNM), those that are covered by a land use planning document are categorically excluded from the National Environmental Policy Act (NEPA). Those not covered by a land use planning document must go through the NEPA planning process, and an environmental document must be prepared. Therefore, CCNM acquisitions must be covered in the plan or in a future plan amendment.

**Table 4. CCNM Possible Acquisitions**

Name	County	Ownership	Proposed Method of Acquisition (Adding to CCNM)
Alder Rock	Monterey	USFS	Congressional action or Presidential Proclamation
Alm Rock	Monterey	USFS	Congressional action or Presidential Proclamation
Bird Rock	Monterey	USFS	Congressional action or Presidential Proclamation
Cape Vizcaíno Islands 1, 2 and 3	Mendocino	Private	Donation or purchase
Castle Rock (South)	Monterey	USFS	Congressional action or Presidential Proclamation
La Cruz Rock	San Luis Obispo	Private	Donation or purchase
Two rocks in the vicinity of Laguna Beach	Orange	BLM	Congressional action to revoke Act of Congress of 5/28/35
Mendocino Island 1 and 2	Mendocino	Private (?)	Donation or purchase
Middle Rock	Monterey	USFS	Congressional action or Presidential Proclamation
Orange County Rocks	Orange	BLM	Congressional action to revoke Act of Congress of 2/18/31
Outer islet	San Luis Obispo	Private	Donation or purchase
Piedra Blanca No. 1 and No. 2	San Luis Obispo	Private	Donation or purchase
Plaskett Rock	Monterey	Private	Donation or purchase
Prewitt Rock	Monterey	USFS	Congressional action or Presidential Proclamation
St. George Reef	Del Norte	USCG	Revoke EO lighthouse withdrawal of 1/29/1867
San Juan Rocks	Orange	BLM	Congressional action to revoke Act of Congress of 5/28/35
San Martin Rock	Monterey	USFS	Congressional action or Presidential Proclamation
San Mateo Rocks	Orange	BLM	Congressional action to revoke Act of Congress of 5/28/35
Sea Lion Rock	Mendocino	Private	Donation or purchase (Note: BLM may acquire through Stornetta Acquisition)
Sea Lion Rock	Monterey	USFS	Congressional action or Presidential Proclamation
Sea Lion Rock	Monterey	U.S. Army	Transfer
Sugarloaf Island	Humboldt	USCG	Revoke EO lighthouse withdrawal of 5/23/1867
Villa Rock	Monterey	U.S. Army	Transfer
Whaleboat Rock	Monterey	USFS	Congressional action or Presidential Proclamation
White Rock No. 2	Monterey	USFS	Congressional action or Presidential Proclamation

Notes:

BLM = U.S. Bureau of Land Management.  
EO = Executive Order.

USCG = U.S. Coast Guard.  
USFS = U.S. Forest Service.

## Management Options

The following management options are proposed.

**Protection.** Identify trespasses, address them, and take action to prevent unauthorized uses.

**Research.** BLM could fill data gaps by completing accurate mapping of existing coastline features, adjacent land use activities, and access conditions, and by clarifying lines of jurisdiction.

**Planning.** BLM could implement the existing policy for land acquisitions. BLM must identify lands for acquisition. Possible candidates might include rocks currently owned by the Hearst Corporation (i.e., Piedra Blanca No. 1, Piedra Blanca No. 2, Outer Islet, and La Cruz Rock in the Piedras Blancas area) and Plaskett Rock along the southern portion of Big Sur.

BLM must consider revoking existing withdrawals on land that could and/or should be part of the CCNM (i.e., rocks and small islands)<sup>4</sup>. Candidates include features withdrawn by the USCG for lighthouse or aids-to-navigation purposes but never used (e.g., islets off St. George Reef, exclusive of the St. George Light Station, and Sugarloaf Island off Cape Mendocino) and rocks withdrawn for military purposes that are no longer used by the U.S. Army (e.g., two rocks offshore from the Los Padres National Forest in the Big Sur area). Easements could be issued where necessary to authorize future aids-to-navigation.

BLM must also review whether ownership transfer or conservation easement is appropriate for specific properties within the CCNM.

Finally, BLM could identify specific realty staffing needs of the CCNM.

---

<sup>4</sup> Withdrawals can be made, modified, or revoked only by the Secretary of the Interior or the Congress.

# Minerals and Energy Programs

## Description of Resource

The presence of mineral deposits and energy resources on the rocks and islands of the CCNM have not been systematically documented. Within submerged lands adjacent to the monument, mineral deposits include:

- x aggregate resources, such as sand, silt, and gravel;
- x precious and semi-precious stones and metals, including gold, jade, titanium, platinum, barite, manganese, nickel, cobalt, and copper (California Resources Agency 1997); and
- x fluid minerals, including oil and natural gas deposits and seeps. The seeps are catalogued by USGS (USGS 2003).

## Power Production along Coast

Numerous power plants exist along the coast of California. While these plants do not directly affect the CCNM or use of its resources, they may indirectly affect air and water quality through emissions and uptake and discharge of cooling water. Although a list of power plants located on the coast was not available, Table 5 summarizes the number of plants over 1 megawatt (MW) in each of the coastal counties.

**Table 5.** Power Production in the Coastal Counties

County	Number of Plants
Humboldt	8
Los Angeles	129
Mendocino	6
Monterey	11
Orange	27
San Diego	68
San Francisco	3
San Luis Obispo	7
San Mateo	3
Santa Barbara	13
Santa Cruz	7
Sonoma	14
Ventura	<u>22</u>
Total	318



Of particular note, Humboldt County and Los Angeles County have the largest power plants, including all those over 200 MW. While most plants along the coast burn natural gas or oil, one nuclear plant exists, the Diablo Canyon plant in San Luis Obispo County.

## Past and Present Uses of Resource

Small-scale recreational mineral collection occurs along various portions of the coast, such as recreational jade collection along the Big Sur coastline. Much of this collection is performed by divers outside the CCONM boundaries; however, although not likely, some collection may occur within the CCONM. No data are available regarding the extent of recreational collection within the CCONM.

Nearshore and offshore oil and gas production occurs in multiple locations within the coastal waters of California. Leases exist for large tracts of open ocean along the coast, especially in the Santa Barbara Channel of the central California coast. Currently, 26 production platforms, 1 processing platform, and 6 artificial oil and gas production islands are located in the waters offshore California. Of the 27 platforms, 4 are located in State waters offshore Santa Barbara and Orange Counties, and 23 are located in federal waters offshore Santa Barbara, Ventura, and Los Angeles Counties (California Resources Agency 1999).

Nearshore and offshore mineral production occurs for various resources at multiple locations, including:

- x sand and gravel from Santa Catalina Island and within the outer continental shelf of Southern California (San Pedro Shelf and San Diego Shelf);
- x heavy minerals from various areas off the coast;
- x barite nodules east of San Clemente Island, southwest of San Nicolas Island, on the southwest slope of Cortes Bank, on the Patton Escarpment, and southwest of Navy Bank; and
- x manganese nodules, primarily on the abyssal ocean floor and submarine ridges, and on the lower continental slope.

Historically, sand mining operations were conducted in the Monterey Bay Area. In addition, the entire California coastline has a history of mining operations for beach placers, in particular gold and jade. Beach placers are concentrations of heavy minerals deposited as a result of the action of shore currents and waves, which tend to sort and distribute the materials broken down from the sea cliffs or washed into the sea by streams. Under special circumstances, gold deposits can be formed by the action of the waves, winds, and currents on the seashores. Some of this mining activity may have historically occurred on the CCONM.

## Present Management Situation

The CCNM has not been managed as a source of minerals or energy since 1930 at the latest. The islands were first withdrawn from surface entry, mining, and mineral leasing by Executive Order No. 5328, signed by President Hoover and dated April 14, 1930, which temporarily withdrew all of the unreserved islands, rocks, and pinnacles situated in the Pacific Ocean off the coast of California from settlement, location, sale, or entry, for classification and in aid of legislation.

This order was revoked by Public Land Order 6369, issued in April 1983 and signed by the Secretary of the Interior, which also withdrew all of the unreserved islands, rocks, pinnacles, and reefs off the coast of California, except Pelican and Round Rocks near Crescent City, from surface entry, mining, and mineral leasing—to protect the islands for establishment of the California Islands Wildlife Sanctuary. The withdrawal was to remain in effect for 50 years.

This Public Lands Order was supplemented by the January 11, 2000 Presidential Proclamation, which appropriated and withdrew the monument from “all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument.”

Energy development and mineral extraction from the submerged lands adjacent to the CCNM are, in most cases, managed by the State of California within 3 nautical miles of the coast and by the federal MMS seaward from the state/federal boundary (i.e., 3 nautical miles to 12 nautical miles from the coastline). As discussed, mineral leases (primarily oil and gas) exist for large tracts of open ocean along the coast. The Santa Barbara oil spill in 1969 contributed significantly to the environmental movement in California. Since 1970, periodic attempts by the Federal Government to issue additional leases for oil exploration along the California coast have been opposed by the State, although seven new federal lease sales have occurred. Although the State has not had a major lease sale since 1970, it issued an oil and gas lease in 1973 (PRC 4736) and still maintains 34 active leases in state waters.

## Anticipated Future Conditions

With the establishment of the CCNM, it is unlikely that mineral extraction or energy development will be contemplated for the rocks and islands off the California coast. It is possible, however, that the Federal or State Government will consider developing additional energy sources along the coast in efforts to reduce dependence on imported oil and gas. Because of its CCNM management responsibilities, BLM would be in a position to review and comment on any such planning efforts.

In addition, ongoing mineral extraction along the coast could result in hazardous spills, with indirect impacts to the monument. This issue is discussed in more detail under Hazardous Materials.

## Management Options

The following management options are proposed.

**Research.** As part of the research related to the geology of the CCNM, potential mineral or energy resources within the CCNM could be identified. For a more detailed discussion of such research as a management option, please refer to Geology, Topography, and Soil Resources.

In addition, if it were determined that a significant potential existed for indirect effects on the CCNM as a result of energy exploration and extraction activities along the California coast, research to identify and analyze these indirect effects could be carried out. This research could be carried out through the various cooperating entities, most notably MMS and the California State Lands Commission, or even DFG, as agencies concerned with oil spill effects on wildlife.

**Education.** BLM could use its CCNM interpretation and education programs to inform the public about the relationship of the monument to the surrounding submerged mineral resources, particularly in the vicinity of the Santa Barbara Channel. These programs could highlight the potential value of the mineral resources and describe the risks that mineral extraction pose to the fragile biological resources supported by the monument. This outreach could be performed through cooperative arrangements with one of BLM's core partners, DPR.

**Protection.** Because the monument is protected from energy and mineral extraction by the Proclamation, no additional protective measures are deemed necessary. The indirect effects of energy exploration and production in nearby submerged lands may warrant additional protective measures. Because regulation of these activities is beyond the purview of BLM, the Bureau would need to serve in an advisory or cooperative capacity with other agencies that regulate such activities.

**Planning.** This option is similar to Protection, above. Because the monument is withdrawn from mineral and energy exploration and extraction, no additional planning activities are deemed necessary.

# Paleontological Resources

## Description of Resource

Because of the sedimentary nature of many of the CCNM's features, the CCNM likely contains paleontological resources. In addition, the CCNM offers excellent opportunities to identify such resources because of the large areas of exposed geologic material found in the rocks and islands of the monument. However, the extent of information available on coastal California's paleontological resources has not been evaluated. (BLM is currently conducting an extensive review of literature on coastal paleontology, but this effort has not yet been completed.) The largest single repository of paleontological information in the state is the UC Museum of Paleontology in Berkeley, California. Additional information sources are being sought to support the RMP process.

## Present Management Situation

BLM currently manages the CCNM under the direction set forth in the Proclamation establishing it as a national monument and the basic regulations under which BLM operates. The Presidential Proclamation does not allow any new mineral extraction or drilling in the CCNM, or removal or alteration of monument features. However, there is currently limited ability to enforce these restrictions or restrict public contact with the CCNM, and no information is available to visitors about the paleontological value of the sedimentary rocks and islands. Therefore, any paleontological resources in the CCNM may be subject to disturbance or destruction by human activities.

## Anticipated Future Conditions

As the population in California grows, more visitors will be attracted to the CCNM. The number of visitors interested in the value of the rocks will increase accordingly, potentially resulting in the degradation of paleontological resources through illegal collection. The rocks will remain protected from energy and mineral extraction because no developments are allowed under the Presidential Proclamation. In addition, the relative isolation of most CCNM features will naturally buffer them from illegal collection.

Over a longer time frame, natural processes such as wind, wave, and precipitation-induced erosion will create gradual attrition of CCNM features and the fossils therein.

## Management Options

The following management options are proposed.

**Research.** To protect potentially significant paleontological resources and to further public and scientific interest in the CCNM, BLM could conduct or promote research to assess the types, locations, and quantities of fossils present. The review of the existing paleontological literature for the coast should be completed to identify areas that contain unique paleontological resources or those areas that are especially valuable to research and interpretation.

New research of the paleontological resources at the CCNM could also be undertaken. Such research could be performed by BLM or through cooperative arrangements and funding with other organizations. In particular, USGS has signed an MOU with BLM nationally to facilitate research activities. Other entities with which to collaborate could include NPS and DPR (which may have data relevant to their land holdings along the coast), universities, and other resource agencies. In addition, collaboration with private citizens and paleontological societies and clubs could prove fruitful. This research effort could also be part of a larger research effort surrounding other aspects of the CCNM, such as studies regarding geologic resources.

**Protection.** Because detailed information is not available regarding much of the paleontological resources found in the monument, management of these resources would need to be adaptive, in response to the data gained through research activities. Based on such data, BLM could establish and enforce public access restrictions such as buffer zones to prevent disturbance to and illegal collection of paleontological resources.

**Education.** BLM could promote the paleontological value of the CCNM by making educational and interpretive material available to the public. This could be performed through collaborative arrangements with partners at pre-existing facilities along the coast, such as the Goat Rock section of the Sonoma Coast State Beach, and other identified portals, such as the Piedras Blancas Light Station or Lost Coast Headlands for paleontological education. This could be part of the larger education initiative associated with the CCNM.

Various levels of agency cooperation may be possible as part of this effort. Promising avenues for cooperative agreements and funding exist for entities with coastal access in the vicinity of the CCNM, including NPS, DPR, and NOAA as well as regional, county, and city parks. BLM could also use its own coastal land holdings, such as the King Range National Conservation Area, to host interpretive facilities; although this may not be as feasible, given the primitive character that is being maintained at this area.

**Planning.** The CCNM management should coordinate with other plans along the coast that address paleontological resources, including general plans and local coastal plans, as well as management plans for state and national parks, marine sanctuaries, and other BLM-managed areas.

## Public Safety and Law Enforcement

### Description of Resource

Public safety and law enforcement issues pertinent to the CCNM include management of water-based recreation, protection of terrestrial and aquatic resources, control of airplane and helicopter overflights, emergency response to spills and accidents, and USCG oversight of maritime commerce and immigration. The coastal features associated with the CCNM are complex areas in which to enforce laws and oversee public safety. Overlapping jurisdictions, isolated coastal areas, and incomplete mapping of the CCNM resources make the monument difficult to monitor and patrol.

### Present Management Situation

Currently, with the exception of prohibitions on the removal of monument features and minerals exploration and extraction, BLM does not impose restrictions on human activity in the CCNM. Further, BLM currently has limited ability to enforce restrictions identified in the Presidential Proclamation. This is further complicated by the variable definition of the CCNM (i.e., mean high tide), since it may be difficult to ascertain precisely when activities are within BLM jurisdiction.

The CCNM coastline and offshore areas also include federal, state, local, and private jurisdictions. For example, illegal use issues may be overseen by NOAA, the USCG, or individual municipalities and counties. In terms of law enforcement, BLM field offices have uniformed law enforcement rangers, and the DOI has special agents that provide law enforcement for BLM. In addition, although BLM retains legal responsibility for the CCNM, DFG historically has handled the day-to-day management of the area under authority granted in the 1983 MOU. DFG, through the California Fish and Game Code, is responsible for protecting the terrestrial and aquatic resources (e.g., macro algae and marine invertebrates) associated with the CCNM. Protection of federally listed endangered or threatened species is managed by USFWS and NOAA Fisheries. Enforcement of laws related to federally protected marine species is implemented by the USCG on behalf of NOAA Fisheries and USFWS. USCG also provides emergency oil spill response.

As indicated above, various agencies are responsible for law enforcement and public safety, and responsibility is determined based on the resource involved. Most of these entities have general regulations and policies regarding public

safety. Because the CCNM spans many jurisdictions, these policies are not consistent throughout the area. One municipality may offer lifeguard services, and another may involve an NOAA or DFG officer to help oversee water-based recreation. Overflights by civilian and military aircraft are restricted in some areas by zones designated by the Federal Aviation Administration. In addition, because BLM is not currently providing support in this area, and other agencies have not been active in enforcing laws within the CCNM, little law enforcement or provision for public safety within the monument exists.

## Anticipated Future Conditions

Although conditions related to public safety and law enforcement are expected to remain similar to current conditions, the opportunity exists to increase coordination between BLM, CCNM partners with law enforcement authority, and the wide variety of other law enforcement authorities along the California coast. The recent emphasis on homeland security may further restrict overflights of helicopters or small planes. At this time, it is still unclear how homeland security policies may affect the CCNM.

The USCG will continue to increase their involvement in endangered species compliance to support USFWS and NOAA Fisheries, with the possibility of adding enforcement of federal laws associated with the CCNM to their realm of responsibilities.

## Management Options

Many of the lands within the CCNM overlap different jurisdictions and include patrol areas for various other agencies. Rangers patrol state parks and lifeguards monitor certain beaches. BLM may not need to develop new management or enforcement but rather coordinate with these existing entities to protect the resource and the public. It is important that the public safety issues and enforcement related to the CCNM are developed in close coordination with the agencies currently enforcing areas within the CCNM. The following management options are proposed.

**Research.** Additional data are needed to ensure that public safety and law enforcement are appropriately managed in the CCNM. Neither BLM nor DFG has accurate maps of the locations of CCNM resources. It is important to identify not only the boundaries of the CCNM and the resources it comprises but also the overlapping jurisdictions within the area. Close coordination and communication between jurisdictional agencies will be important to provide consistent management of the CCNM.

**Protection.** Areas in which BLM could provide management directly related to protecting CCNM resources include the following.

**Staffing.** BLM could add staff to its field offices in order to provide an increased level of involvement in safeguarding the public and enforcing laws that protect the resources of the CCNM. This staff could work in concert with existing public safety and enforcement staff from federal, state, and local government agencies.

**Stewards Program.** Since several organizations are interested in protection of the CCNM, BLM could define a stewards program to assist with monitoring the resources along the coast.

**Enforcement.** DOI special agents and BLM law enforcement rangers could develop enforcement and patrol strategies specific to the CCNM, as well as identify specific law enforcement partnership opportunities and cooperative agreement needs. Existing laws addressing such issues as unauthorized use, vandalism, and illegal collection could be enforced to protect the CCNM. USCG could also assist in enforcing federal laws within the CCNM, and lifeguards within municipalities could assist in enforcing regulations of the CCNM resources. An existing environmental enforcement task force consisting of DOI agents and BLM rangers, BLM hazardous materials specialists, other federal agencies, the DFG, and other state and local law enforcement agencies could be made available to respond to special circumstances or enforcement needs within the monument.

**Training.** Staff at the five BLM coastal field offices could receive enforcement training to understand laws, appropriate procedures, and emergency response protocols specific to the CCNM. BLM could develop a training module for other law enforcement authorities to familiarize them with the CCNM, its purpose and related management focuses, and its applicable laws and regulations.

**Planning.** In addition to collecting data, BLM could review and update emergency response and spill response plans for the CCNM. Accurate contact lists, emergency public notification protocols, and evacuation procedures would be needed. This effort could be coordinated with each of the relevant entities and jurisdictions along the coastline.

Cooperative agreements, like the MOU signed between BLM, DFG, and DPR, could be drafted to assist in monitoring the protected resources. Various environmental organizations, local citizen groups, local and state police, and tribes associated with sections of the CCNM can help understaffed agencies. To achieve additional protection of resources, BLM could implement programs allowing members of the public to alert authorities to violations (as does the Cal-TIP program, which pertains to poaching and polluting, and BayNet, the Monterey Bay National Marine Sanctuary Volunteer Network).



# Recreation

## Description of Resource

Coastal recreation and tourism is a major industry in California. It has been estimated that, in 1992, the value of tourism and recreation along the California coast was \$9.9 billion. Of this total, \$6.6 billion was from direct spending and \$3.3 billion was indirect spending estimated from economic income multipliers (Moller and Fitz 1994). Much of this recreation is in proximity to or within the CCONM. Table 6 shows coastal state park and recreation area attendance for 1992 by county.

**Table 6.** 1992 California Coastal State Park and Recreation Area Attendance (in thousands of persons)

County	Day Use	Overnight Camping	Total Attendance
Del Norte	59.4	37.0	96.4
Humboldt	872.3	142.4	1,014.7
Mendocino	1,771.1	246.0	2,017.2
Sonoma	2,817.6	151.1	2,968.7
Marin	1,653.1	44.7	1,697.8
San Francisco	231.5	0.0	231.5
San Mateo	958.7	61.2	1,019.9
Santa Cruz	4,238.8	363.3	4,602.1
Monterey	2,222.8	17.2	2,240.0
San Luis Obispo	3,861.0	603.0	4,464.0
Santa Barbara	791.1	596.4	1,387.5
Ventura	2,108.3	173.8	2,282.2
Los Angeles	548.3	107.5	655.8
Orange	4,923.8	279.0	5,202.8
San Diego	<u>6,187.6</u>	<u>422.1</u>	<u>6,609.7</u>
Total	33,245.4	3,244.6	36,490.0

Source: California Department of Parks and Recreation.

Table 7 shows NPS statistics on visitation to coastal parks in 2002.

**Table 7.** 2002 National Park Service Visitor Summary by Park

Park	Visitation in 2002
Cabrillo National Monument	1,048,371
Channel Islands National Park	613,935
Fort Point National Historic Park (within Golden Gate National Recreation Area)	1,617,824
Golden Gate National Recreation Area	13,961,267
Point Reyes National Seashore	2,395,693
Redwoods National Park	404,789
Santa Monica Mountains National Recreation Area	469,376

Source: <http://www2.nature.nps.gov/stats/>.

Eight primary recreational activities occur near the rocks and islands of the CCNM. They include:

- sea kayaking/canoeing;
- motor boating/sailing;
- fishing;
- scuba diving/snorkeling;
- flyovers by recreational pilots;
- surfing;
- viewing of wildlife from coastal bluffs; and
- sightseeing from coastal bluffs.

The rocks and islands in the CCNM offer limited public access because they are located offshore, separated from the mainland by heavy surf conditions; are of small average size; and have steep rock faces. Safety risks, a lack of landing areas, and limited recreational values naturally limit public access to the rocks. However, some rocks accommodate exploration because they are close to the mainland at low tides or because they have safe landing areas for boats. In these cases, people take the opportunity to climb rocks, hike, explore tidepools, take photographs, create art, and observe nature.

The eight recreational activities listed above are enhanced by the scenic and geologic components of the CCNM. Above and below water, the rocks serve as habitat for a wide variety of marine plants, invertebrates, fish, and marine mammals. Rocky cliff faces and flat-topped sea stacks support unique coastal plants and seabird colonies. These rich natural resources in turn enhance the recreational values of the monument. Anglers, scuba divers, snorkelers, and

wildlife observers come in search of wildlife; boaters and surfers search for good waves or routes around the rocks; and pilots and sightseers seek remarkable vistas.

The numbers and types of recreational uses vary considerably throughout the CCNM area. Recreational pressures tend to be the most intense near the state's urban centers, and recreational boaters are further concentrated around a limited number of access points. Although there are more than 850 public coastal access points in California, there are far fewer boat launch ramps.

State, county, and site-specific statistics on the current types and frequencies of recreational uses are incomplete. As a result, resource management, education, access, and law enforcement efforts are prioritized without a full picture of recreational pressures. For example, the impacts of various recreational activities on wildlife are not thoroughly understood. Further specific information on such impacts would allow land managers to enforce minimum distances between wildlife and recreational users, and would supplement data regarding long-term trends of wildlife disturbance.

## Present Management Situation

With the exception of the King Range National Conservation Area in southern Humboldt County, the Lost Coast Headlands in Humboldt County in northern Mendocino County, Point Sal Area of Critical Environmental Concern in Santa Barbara County, and Piedras Blancas Light Station in northern San Luis Obispo County, almost all publicly owned recreational access areas associated with the CCNM are in non-BLM jurisdictions. The management and control of recreational access to the CCNM depend on cooperation among the many entities and land managers that oversee these access points, and these entities each have their own rules and restrictions regarding allowed recreational activities. The diversity of jurisdictions, the large numbers of unstaffed access points, limited operational budgets, and varying management priorities make monitoring recreational activities and conducting effective public outreach very difficult. Resource management, education, access, and law enforcement efforts are prioritized differently based on the entities involved, and without a full picture of recreational pressures.

## Anticipated Future Conditions

The growing population and the increasing popularity of coastal recreation will heighten demand for coastal access points along the coast, particularly boat launch ramps. The demand for public access to the rocks themselves is not anticipated to increase substantially over time. However, the rapid growth of nonmotorized boating (due to improved technology and safety, lower equipment costs, and an increase in guide services) probably will be duplicated for other water-based recreational activities such as scuba, snorkeling, and motorized boating. In the case of nonmotorized boating, boaters' ability to maneuver within

feet of the rocks and islands could substantially affect pinniped and bird populations. Wildlife viewing and sightseeing will also continue to grow in popularity, and additional access points on bluffs overlooking the CCNM will be needed to meet this demand.

## Management Options

The following management options are proposed.

**Research.** BLM could develop GIS maps and a database of the current recreational access points adjoining the CCNM. The database could include information on the jurisdiction of the area, the point of contact, recreational amenities in the vicinity, the types of recreational activities that occur (as pertains to the CCNM), annual use numbers, existing interpretation facilities, and regulations relevant to the CCNM. This could involve coordination with the California Coastal Commission on their Coastal Access Guide.

To allow establishment of buffer zones, BLM could conduct research to determine the minimum flushing distances, specific to different recreational activities, of each pinniped and nesting seabird species.

**Protection.** BLM could implement seasonal restrictions on some activities, such as distance restrictions to keep people from disturbing nesting seabirds and pupping marine mammals and seasonal closure of sites with sensitive natural resources affected by recreational or commercial activities.

**Education.** BLM could develop educational materials and strategies (e.g., brochures, web sites, onsite exhibits, and equipment decals) in coordination with DPR, DFG, national marine sanctuaries, and other jurisdictions to encourage responsible use and compliance with restrictions on recreational activities.

**Planning.** BLM could provide pass-through operational funds to partnering entities with the most coastal public access presence in that region to manage the day-to-day operation and management of the monument in that area. BLM could retain a small staff of resource specialists to develop statewide management guidelines, create interpretive materials, and monitor operational commitments.

Specifically, BLM could establish cooperative agreements with entities that manage public access points adjoining the CCNM regarding:

- joint enforcement of CCNM and public access point guidelines and regulations;

- inclusion of CCNM educational and regulatory information in agency publications;

- dissemination of CCNM educational materials and posting of directional signs at key locations;

accommodation of BLM staff and development of volunteer programs to conduct interpretive programs within the boundaries of the access point or to depart from the access point;

training of permanent and seasonal agency staff on the subject of the CCNM; and

where possible, development of compatible regulations and outreach materials that communicated seamless messages.

**Infrastructure and Staffing.** To address additional research needs, adaptive management goals, and coordination efforts, BLM could implement one or more of the following options.

Fund a CCNM office with resource specialists (partnerships, interpretation, cultural resources, natural resources, law enforcement) to provide oversight and guidance in their areas of expertise. Work with coastal partners to provide office space for regional outreach coordinators, who would be responsible for day-to-day coordination among partnering entities, communities, and businesses within the region, and who would train staff, disseminate educational materials, post exhibits and directional signs, and monitor use.

Establish CCNM access and information points along the coast. Using areas such as the Piedras Blancas and Point Arena Light Stations as examples, identify other key locations where coastal access to the CCNM merits the development of information centers. These centers could be store-front offices in local communities, shared space owned by a partnering agency, or an access point that is acquired by the agency. BLM staff could operate these offices and/or establish partnership relationships and volunteer corps to assist with public outreach. Resource management and enforcement responsibilities would be directed to each office, with a statewide coordinator monitoring consistency among offices.

## Research

### Description of Resource

Many public and private entities conduct research along the California coast. Various universities, maritime museums, marine sanctuaries, federal and state resource agencies, and nonprofit organizations conduct or sponsor research efforts. A partial list of these institutions is included in Table 8.

**Table 8. California Coastal Research Institutions**

Institution
<b>College/University Institutions</b>
Scripps Institution of Oceanography (UC San Diego)
Hancock Institute for Marine Studies (University of Southern California)
Southern California Marine Institute (Occidental College, University of Southern California, and California State University)
Marine Science Center (UCLA)
Moss Landing Marine Laboratories (California State University)
Hopkins Marine Station (Stanford)
Santa Barbara Marine Science Institute (UC Santa Barbara)
Bodega Bay Marine Lab (UC Davis and UC Berkeley)
Long Marine Lab (UC Santa Cruz)
Humboldt State Marine Research Program (California State University)
Romberg Tiburon Centers (California State University)
<b>Government Agencies</b>
State Water Resources Control Board
California Department of Fish and Game (including the California Department of Fish and Game Office of Oil Spill Prevention and Response)
U.S. Fish and Wildlife Service
U.S. Geological Survey
U.S. Minerals Management Service
National Oceanic and Atmospheric Administration
Beach Erosion Authority for Clean Oceans and Nourishment
California Oceans Resource Management Program (California Resources Agency)
National Marine Sanctuaries
Monterey Bay National Marine Sanctuary
Gulf of the Farallones National Marine Sanctuary
Cordell Banks National Marine Sanctuary
Channel Islands National Marine Sanctuary
<b>Museums and Aquariums</b>
Santa Barbara Maritime Museum
National Maritime Museum (San Francisco)
San Diego Maritime Museum
Los Angeles Maritime Museum
Ventura County Maritime Museum
Maritime Museum of Monterey
Humboldt Bay Maritime Museum (Eureka)
Monterey Bay Aquarium
Cabrillo Marine Aquarium (San Pedro)
Stephen Birch Aquarium, Scripps (La Jolla)
Steinhart Aquarium, California Academy of Science (San Francisco)
Aquarium of the Pacific (Vallejo)
Sea World, San Diego

**Table 8. Continued**

Institution
<b>Other Organizations (including nonprofits)</b>
PRBO Conservation Science
Ocean Conservancy
Pacific Seabird Group
The Otter Project, Inc.
Save Our Shores
Surfrider Foundation
California Coastal Coalition
California Sea Grant
Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)
Communication Partnership for Science and the Sea (COMPASS)
Southern California Coastal Water Research Project
Center for Integrated Coastal Observation, Research and Education (CI-CORE)
Coastal Ocean Currents Monitoring Program

Current research efforts have numerous goals. Many programs are in place to better understand the extent and condition of biological resources, while others study the physical processes that affect the coast. Data collection on important cultural and historic locations is ongoing, and other efforts are aimed at understanding the effects of current human activities on coastal resources and processes.

## Present Management Situation

No known single entity tracks and manages research programs along the California coast. CCNM management staff and BLM field offices currently administer a permit process for institutions or individuals wishing to access the CCNM for research purposes. However, it is not known how many of the research entities along the coast are aware of the requirement to obtain permits from BLM before researchers access the rocks and islands. Other coastal land-owning agencies (e.g., DPR, USFWS, and NPS) also issue research permits for activity within their jurisdictions, as do DFG and NOAA Fisheries. It is possible that permitted researchers might assume that offshore rocks fall within these agencies' allowed research areas. A comprehensive guide to attaining research permits on the California coast could not be found for inclusion in this report.

## Anticipated Future Conditions

It is likely that interest in coastal research opportunities will grow as California's population places escalating pressures on coastal resources. Under the current management situation, there likely will be increasing research activity taking

place without permit on the rocks and islands. This condition may occur because BLM staff resources needed to administer the permit system may be limited, and information about the permitting program may be lacking or may not be easily available to research institutions and individuals.

## Management Options

The following management options are proposed.

**Protection.** BLM can continue to administer the permitting process for conducting research on monument lands. As part of this, areas of critical environmental concern designations could be developed for priority research areas. These could be designated generally or in relationship to research in a specific area. Such designations would include management plans that outline the methodology for obtaining permits and limitations on types of research activities (e.g., overflights and destructive sampling). Other areas of the monument could be designated as closed to entry for research, particularly in areas with highly sensitive resources where research activities would be likely to result in degradation.

In addition, all efforts to protect the natural resources of the monument, as described in the other sections of this report, would also advance the protection and preservation of research opportunities. As such, BLM could actively seek funding opportunities from other federal and state agencies (e.g., NOAA, USGS, USFWS, and DFG's OSPR program), foundations, and corporations in order to ensure that the CCNM receives adequate funding for research that will support protection of its unique and sensitive features.

**Planning.** The CCNM RMP could be used as a vehicle to coordinate ongoing research and research opportunities along the entire California coast. Working with its partner and cooperating entities<sup>5</sup>, BLM CCNM staff could become a clearinghouse of information, including GIS-based data on research locations and subject matter. Data could be collected for only the rocks and islands of the monument, or for the state and federal waters that surround the CCNM and the state lands below the CCNM (below mean high tide) as well.

As an alternative to becoming a research information clearinghouse, BLM could promote an interactive group that periodically shares information on research along the coast. Specifically, the CCNM staff could work with California's 10 primary marine laboratories, 6 marine aquariums, and 7 maritime museums, as well as various state agencies, non-profit organizations, and research collaborations (e.g. PISCO, COMPASS), to

---

<sup>5</sup> The MOU between BLM, DFG, and DPR, signed in spring 2000, indicates that the three agencies agree "to authorize appropriate uses within the Monument only following consultation between [all 3 of] the parties." This includes authorization of research within the CCNM.



coordinate ongoing and planned research efforts, in order to promote the sharing of resources and to prevent unnecessary overlap of data collection.

Also, an early evaluation of current and anticipated research efforts on the California coastal resources could help BLM set initial research priorities and goals for monument research projects. A report that may be helpful for this effort is NOAA's *Sanctuary Science: Evaluation of Status and Information Needs* (NOAA 2002), available at

<[http://sanctuaries.nos.noaa.gov/library/National/science\\_eval.pdf](http://sanctuaries.nos.noaa.gov/library/National/science_eval.pdf)>. The

report outlines current and future projects and goals in research for the national marine sanctuaries. See also the PISCO's main research goals, available on the organization's web site:

<<http://www.piscoweb.org/research/index.html>>.

If BLM were to seek a major role in coordinating or promoting research along the coast, staff would need to be added to the CCNM or to field offices. BLM could seek shared funding of positions for this coordination effort.

**Research.** A tremendous amount of research is needed in a wide variety of subject areas if BLM is to have adequate information to carry out many of the management options outlined in this report. As mentioned above, BLM could contact agencies and entities with known or possible interest in coastal resources and determine the extent of current coastal research. This data collection effort could seek to identify the locations and types of research being conducted on specific CCNM rocks and islands.

At the same time, BLM could compile information on potential research topics that would support its ongoing mission to identify and protect the sensitive resources of the CCNM, as discussed in other sections of this report.

**Education.** BLM could develop educational material, describing BLM research permitting program, for dissemination to research entities. This material could be distributed by state office staff, CCNM staff, and/or BLM field office staff. The goal would be to increase awareness of the permitting process and of the sensitivity of the resources supported by the CCNM.

Also, BLM could inform research institutions about the research efforts planned as part of the RMP as well as the coastal research clearinghouse mentioned above.

Finally, research at the monument could provide a basis for development of interpretive materials that describe the research activities. This could help develop interest and support for research at the CCNM.

# Socioeconomic Conditions

## Description of Resource

Socioeconomic bases that could be affected by the CCONM include California coastal communities located near CCONM visual access points (areas of the coast where the rocks, spires, and stacks of the CCONM are visible from the mainland). The populations along the coastline of California vary socioeconomically depending on location. The northern California coast is characterized by widely spaced, geographically isolated small towns and rural areas. The economy of this northern area is dependent on varying combinations of utilization of local natural resources and revenue from tourism. Coastal areas in Southern California and the San Francisco Bay Area are densely populated and have thriving economies that depend less on direct consumption and/or extraction of natural resources and more on industry and commercial business (including tourist-related business). The Central Coast Area, which stretches south of San Francisco down to Santa Barbara, supports both small and large economies that rely on varying levels of natural resource use as well as revenue generated from tourism. The area shares characteristics of both the northern and southern California coastal economies.

Communities along the coast are often divided regarding management of the CCONM. Many are in support of management practices that will draw additional tourist revenue to the coastal communities, while others are concerned that such activity will degrade the character of the coastal area.

Kelp and seaweed harvesting is an important economic activity that occurs in the vicinity of numerous CCONM rocks south of the San Francisco Bay Area, and could be affected by management decisions made to protect the resources of the CCONM. In 1992, 91,251 tons were harvested from California coastal waters, at a value of \$2,933,721. Particularly heavy harvesting occurs between Point Año Nuevo and Point Santa Cruz, in the area from Point Sur south to Morro Bay (including Piedras Blancas), around the Channel Islands, and from Dana Point to Del Mar (California Resources Agency 1997).

## Present Management Situation

Currently, there is no management of the number of visitors to the CCONM and nearby lands. The socioeconomic effects of the monument on coastal communities have not been evaluated.

## Anticipated Future Conditions

As California's population grows, more people will visit the California coast and surrounding areas. The increase in interest and use may change the socioeconomic conditions of smaller coastal communities and cause a shift in the

way of life of residents. Under current management conditions, it is unlikely that the CCNM and its management will significantly affect local socioeconomic conditions in communities along the coast.

## Management Options

The following management options are proposed.

**Protection.** Preserving the character of small towns can be one consideration in developing public access routes, outreach programs, and management strategies for the CCNM. It should be a priority to manage these areas so as to enhance the existing social character of all areas along the Coast.

As part of this effort, BLM could promote partnerships with coastal commercial interests and local governments to provide economic stimulus. Interpretive materials, education programs, access improvement, and leasing to commercial operations could be geared to providing this stimulus.

**Research.** BLM could provide staff or encourage participation by research institutions and community groups to research and monitor the effects of CCNM management actions on coastal socioeconomic conditions.

## Vegetation

### Description of Resource

#### Physical Conditions

##### Terrestrial Vegetation

There are no databases documenting the terrestrial vegetation present in the CCNM. Although comprehensive studies have been made of the vegetation on the larger islands off California's coast (e.g., Santa Catalina, San Clemente, San Nicolas, and Santa Barbara Islands; Año Nuevo; and the Farallons), very little is known of the botanical character of the smaller islands and rocks in the CCNM, particularly in northern California. Most of these offshore features lack soil sufficient to support complex vegetation. However, plant species found on the islands and rocks that do support vegetation are believed to be largely representative of adjacent mainland communities that existed before human disturbance and modification began. In addition, because the islands are remote, some level of endemism may be represented by unique, as yet undocumented taxa in these communities. To date, no comprehensive surveys of the plants on these islands and rocks have been conducted to verify these hypotheses.

## Intertidal Vegetation

Marine vegetation in the CCNM includes species that are tolerant of regular, prolonged exposure and desiccation, in the splash zone and upper intertidal zone. Crustose forms of blue-green algae (*Cyanophyta*) and black-colored lichens typically grow in the splash zone. In the upper intertidal areas, green algae (*Chlorophyta*) such as sea felt (*Enteromorpha* spp.) and sea lettuce (*Ulva* spp.) typically occur.

There are no databases documenting the intertidal vegetation present in the CCNM.

## Special-Status Species

No comprehensive inventory of vegetation has been conducted in any area of the CCNM, so it is not known whether any federally or state-listed species exist on the monument's islands or rocks. However, surveys of the larger coastal islands not included in the CCNM have identified numerous endemic plant species, many of which are currently classified as threatened or endangered. There is potential for similar endemism to occur on the larger vegetated islets, rocks, and shoreline cliffs within the CCNM. Focused botanical studies are needed to make these determinations.

## Nonnative Species and Noxious Weeds

On the larger coastal islands, such as San Clemente, San Miguel, San Nicolas, Santa Barbara, and Santa Rosa Islands, nonnative plants account for 20 to 58 percent of all plant species. Introduction of these species may have occurred largely because of human activity, but some level of natural dispersal from the mainland may be partly responsible. Because no comprehensive survey of the vegetated islands and rocks within the CCNM has been conducted, the percentages of nonnative plants on these features are not known. The same is true for the percentages of noxious weeds. Focused botanical surveys are needed to make these determinations.

## Principal Uses of Vegetation

### Wildlife Habitat

Terrestrial and intertidal vegetation provide important habitat for numerous wildlife species. On islands with vegetation and deep soil layers, burrowing bird species, such as storm-petrel, Cassin's auklet, rhinoceros auklet, and tufted puffin, often establish colonies in these areas. On some of the larger islands with grass or shrub communities, a variety of invertebrates, such as land snails, grasshoppers, crickets, flies, bees, butterflies, and moths, may be found, depending on proximity to the mainland and suitability of habitat. Several passerine birds, including song sparrow, and a variety of migratory species, also occasionally use these areas.

Intertidal vegetation provides habitat for a variety of invertebrates, including rock louse (*Ligia occidentalis*), periwinkles (*Littorina* spp.), limpets (*Lottia* spp.), chitons (e.g., *Nuttalina* spp.), barnacles (*Chthamalus* spp.), and, during high water, hermit crabs (*Pagurus* spp.) and shore crabs (*Pachygraspus* spp.).

### Seaweed Harvest

Seaweed is regularly harvested by a variety of private and commercial interests. Species harvested include nori (*Porphyra*), wakame (*Alaria*), kombu (*Laminaria*), sea palm fronds, dulse, fucus tips (Bladderwrack), grapestone (*Gigartina papillata*), sea whip fronds (*Nereocystis*), sea lettuce (*Ulva*), feather boa (*Egregia menziesii*) and Turkish towel (*Gigartina exasperata*).

### Traditional Materials

Seaweed, grasses, and driftwood are typical traditional vegetative materials used by Native Americans that inhabited lands in the vicinity of the CCONM.

## Present Management Situation

Vegetative resources of the California coast are regulated and protected by numerous laws and agencies, including the California Coastal Act, the federal Endangered Species Act (ESA), the Clean Water Act, the California Endangered Species Act (CESA), the Porter-Cologne Water Quality Control Act, and local jurisdictional planning authorities. Primary issues of concern are disturbance of natural vegetation by recreation and commercial activities and the introduction of exotic species. BLM has no specific field office policies for vegetation management within the CCONM, beyond the restrictions stipulated by state and federal regulations for listed species. The level of consistency in vegetation management among overlapping jurisdictions has not been determined.

## Anticipated Future Conditions

Global climate change may create warmer temperatures that could affect the viability and distributions of some plant species within the CCONM. In addition, public recreational contact with the CCONM is likely to increase because of population growth. Increased contact could result in disturbance of vegetation within the CCONM and introduction of exotic plant species.

## Management Options

The following management options are proposed.

**Research.** BLM could conduct or sponsor a comprehensive inventory of the vegetation in the CCONM to identify all species of concern and to locate important plant communities.

**Protection.** BLM could monitor and restrict recreational and other activities that could negatively affect vegetative resources. Also, vegetation patterns could be monitored to track changes in vegetative communities and identify their causes. Maintenance may be needed to ensure the long-term viability of these resources.

**Education.** BLM could develop interpretative and educational facilities along the coast that raise public awareness regarding the unique and rare vegetation found at the CCNM. This effort could be accomplished through cooperative agreements and funding between BLM and other entities with coastal access in the vicinity of the CCNM such as other federal agencies; DPR; regional, county, and city parks; and private entities such as the Monterey Bay Aquarium. BLM could also use its own coastal land holdings to host interpretive facilities.

**Planning.** BLM could plan research and protection efforts to tie in with current projects by groups such as PISCO and the Sanctuary Integrated Monitoring Network (SIMoN), as well as existing programs in the DFG and DPR.

## Visual Resources

### Description of Resource

The islands and rocks of the CCNM represent a tremendous visual resource along the coast of California. The rocks and islands contribute to scenic views and make for excellent photographs. They are a key visual element that defines the California coast.

As visual resources along the coast, the rocks and islands create distinctive visual patterns and serve as striking and memorable landscape components. In their natural setting, the CCNM's features represent a landscape that is free from encroaching elements, having high visual integrity. The visual coherence and compositional harmony of the rocks and islands, when considered as a whole, provide a unified landscape that defines the western edge of California.

### Present Management Situation

No specific BLM regulations or management policies govern the visual resources of the CCNM. However, present land management and development oversight by the California Coastal Commission, Caltrans, the California Coastal Conservancy, and local counties and cities indirectly affect access to visual resources, including both distant and immediate views of the CCNM. Because such a great volume of the viewers and sensitive receptors of CCNM resources are roadway travelers, it is especially important to engage Caltrans in the inventory, planning, and management process.

## Anticipated Future Conditions

Future coastal development may alter vistas to the CCNM or reduce access to such vistas. There is also the potential for physical and visual change to the CCNM resources based on infrastructure for navigational guidance systems, infrastructure for communication, constructed controls on beach formation and other physical processes, infrastructure for research on the CCNM resources themselves, and other identified built elements. A key component of the future condition is that it should be anticipated that visual access is increased and not just maintained, and that increased passive recreation, interpretive programs, and designated and directed vistas will place even greater emphasis on views than presently exists.

## Management Options

The following management options are proposed.

**Resource Inventory and Classification.** A key initial step in determining appropriate management would be to apply BLM Visual Resource Management Program (VRM 8410) to inventory and classify the CCNM resources. Application of this program would facilitate analysis of the resources based on groupings of homogeneous classes. These classes would factor the character, quality, and context of views, modified by the sensitivity of the view (including activity of viewers, distance, duration, frequency, and other human response factors). An important element of the inventory would be to coordinate with the California Coastal Commission, the California Coastal Conservancy, Caltrans, and similar management entities that may have existing inventory and classification data. The goal of coordination would be to ensure consistency and efficiency of applied visual resource inventory classes.

**Coordination for Resource Management.** BLM could work with the entities that have landward coastal land use regulatory authority to manage public and private lands in a manner that will protect the quality of the scenic (visual resource) values of the CCNM and adjacent lands.

Also, BLM could work with Caltrans and local counties and cities along the coast to ensure that development along scenic routes (e.g., Highway 1) preserves vistas of the CCNM rocks and islands. BLM, in coordination with these agencies, could create opportunities for placing interpretive signs and including educational features along the routes. BLM could become actively involved with coastal land use planning efforts to maintain the visual character of the coastline as it relates to the CCNM.

A specific action related to inter-governmental coordination would include overlaying municipal land use designations with the visual resource inventory classes (as described above) to determine visual resource management classes consistent with BLM's VRM 8410. These combined

tools would facilitate knowledge of what the resources are, who sees them, and how they may be affected, which are key components of a management plan.

An additional specific action related to this management option would include a study of existing municipal resource policies, guidelines, and codes. Based on this existing regulatory context, BLM should provide guidance to municipalities to strengthen and ensure consistency among cities and counties for the treatment of CCNM resources and views of the resources. This step could be further implemented through a memorandum of agreement or MOU regarding treatment of CCNM resources.

**Interpretation.** To further educate coastal users about the CCNM and its aesthetic values, interpretive signs and other interpretive measures could be implemented. Partnerships should be sought with other entities such as Caltrans, who have responsibility for resources and public outreach in the coastal corridor. As specific examples, Caltrans and BLM may partner on public outreach ideas such as low-power radio broadcasts from localized transmitters to inform the driving public about nearby resources, developing digital driving tours to educate the public and increase tourism, and developing interpretive signage at roadway vista points.

## Water Resources

### Description of Resource

The CCNM itself does not contain significant water resources; however, it comprises islands, rocks, and reefs located in the Pacific Ocean that are surrounded by water. The water surrounding these features supports a variety of plants and animals, including marine mammals, fish, migratory birds, and marine flora, in both the littoral and intertidal zones. The variation in water temperature and other abiotic factors result in varying environments along the coast.

Pollution of coastal water is a threat to the CCNM. People use the coast for both commercial purposes, such as resource extraction and use, and recreational activities, including snorkeling, diving, boating, kayaking, and surfing. The ocean also is used as a sink for pollutants contained in treated wastewater, industrial discharges, and urban and agricultural runoff. In the near future, some coastal waters will be subject to discharges from desalination facilities needed to meet the growing population's increasing demand for clean drinking water.

Pollution of the beaches and ocean is generally concentrated around Los Angeles, San Diego, and San Francisco Bay, where populations are densest and people have easy coastal access. Pollution in these areas can be attributed to both point sources (such as municipal wastewater treatment facilities, industrial facilities, and coastal power plants) and non-point sources, such as urban and agricultural runoff, leaks, accidental spills, trash/flotsam, and illegal dumping. Offshore oil and gas operations often include routine discharges and sometimes oil spills.



Thousands of point-source discharges have been permitted by the regulatory agencies along the entire coastline.

In addition, throughout the state, people use fresh water from rivers that feed the ocean. This use reduces the amount of fresh water entering and diluting the coastal areas, affecting the quality of the water in estuarine areas along the coast. Augmenting this problem, demand for drinking water is increasing, and desalination has become a feasible means to meet the demand. Desalination plants must be located near the ocean and may adversely affect the marine environment through the discharge of heated brine and associated pollutants, as well as through the physical process of collecting and removing the water.

Human-induced coastal erosion and sedimentation could adversely affect monument resources through degradation of water quality. Activities that affect erosive forces include dam construction, river channelization, and other developments.

Maritime traffic leads to non-point source pollution, as well as the discharge of ballast water. The main pollutants generated by ship traffic are sewage, oily bilge water, hazardous wastes, and solid wastes. As an example, large cruise ships can generate as much as eleven million gallons of waste per day. Under the Clean Water Act, raw sewage from ships can be discharged within 3 nautical miles of the coast, and therefore could have significant impacts on the CCNM. Millions of gallons of ballast water are taken in to stabilize vessels for safe and efficient operation, and this water is often discharged in a different region or even a different continent than the one from which it was taken. During this process, thousands of species of marine organisms, including various types of larvae, fish eggs, and microorganisms, are taken into ships' hulls. Because of this, ballast discharges commonly contain non-native, invasive aquatic species. While ballast water exchange is required to occur 200 nautical miles from the coast, in practice it often occurs much closer to the coast and could therefore affect the CCNM.

Mineral extraction activities within coastal waters, as described under Minerals and Energy Resources, may contribute to water pollution that could affect the CCNM, particularly in the event of oil spills or other catastrophic events.

Region IX of the EPA has established six ocean disposal sites for dredge material and spoils, primarily accepting material from harbor dredging activities. These include one location offshore of Humboldt County, two sites located offshore of the Golden Gate, two areas offshore of Orange County, and one site offshore of San Diego County near the Mexico border (Science Applications 2003). These sites may contribute contaminants to coastal waters, depending on the characteristics of the disposed material. In addition, small-scale dredging and incidental fill (such as sidecasting of landslides by Caltrans off State Route 1 in San Mateo County) is known to occur, with potential impacts on monument resources. This incidental disposal could further contribute to pollution problems, and fill that extends above the mean high tide line would create new CCNM features.

Finally, naturally occurring features may adversely affect water quality and CCNM resources. First, animal excrement may affect both the monument and waters surrounding it. Second, as identified under Minerals and Energy Resources, the offshore areas of California possess numerous naturally occurring oil and natural gas seeps. Identified seeps span as far north as Eureka, and as far south as Santa Barbara. Oil seeps north of Santa Cruz, south of Half Moon Bay, offshore of Moss Beach (south of San Francisco), offshore of Point Arena, north of Fort Bragg, at Point Conception, and offshore of the Point Reyes National Seashore, and natural gas seeps offshore of the Point Reyes National Seashore are in proximity to the CCNM features. These seeps may adversely affect water quality as well as biota located in the splash zone of the CCNM, particularly in the area between Lompoc and Oxnard, where tar from these seeps washes on shore.

Impaired coastal water quality could adversely affect the plants and animals found in the CCNM. Pollutants from automobiles, oil spills, and urban and agricultural runoff can cause major developmental and reproductive problems for fish and other marine animals. The intertidal and splash zones are the most sensitive to increased concentrations of oil and other contaminants in the ocean.

## Impaired Water Bodies

Table 9 summarizes the number of coastal shorelines, estuaries, and bays that have been designated as impaired under the Clean Water Act, Section 303(d).

**Table 9.** Coastal Impaired Water Bodies

Regional Board	Geographic Extent (County)	Number of Impaired Water Bodies		
		Bays	Estuaries	Coastal Segments
1 (North Coast)	Oregon border to Northern Marin	1	2	0
2 (San Francisco Bay)	Marin to San Mateo	0	0	5
3 (Central Coast)	Santa Cruz to Santa Barbara	3	9	11
4 (Los Angeles)	Ventura to Los Angeles	12	4	57
8 (Santa Ana)	Orange	3	1	3
9 (San Diego)	Orange to Mexico Border	13	10	20
Source: SWRCB 2003.				

Note that this list excludes those waterbodies located within the San Francisco Bay, as this is outside the area of the CCNM. On the whole, the highest numbers of impairments are located in the Los Angeles and San Diego areas.

## Present Management Situation

BLM does not regulate coastal water quality; this activity is the responsibility of the State Water Resources Control Board (SWRCB) and various regional water quality control boards (RWQCBs), with oversight by EPA, as mandated by the federal Clean Water Act and the state Porter-Cologne Water Quality Control Act. SWRCB administers water rights, water pollution control, and water quality functions throughout the state. The RWQCBs conduct planning, permitting, and enforcement activities. The CCNM falls within the jurisdiction of six RWQCBs: Region 1 (North Coast), Region 2 (San Francisco Bay), Region 3 (Central Coast), Region 4 (Los Angeles), Region 8 (Santa Ana), and Region 9 (San Diego).

These boards regulate non-point source and point source pollution, including stormwater discharge, urban and industrial waste discharge, and any other discharge that could reach navigable waters. The guiding document is SWRCB's *California Ocean Plan*, which identifies plans and policies for maintaining coastal water quality (SWRCB 2001). EPA, as well as the SWRCB, regulates the dumping of sewage and wastewater into the ocean, although it remains a serious problem—especially in densely populated areas such as southern California. The Director of Environmental Health for each coastal county in California is required to report annually to the SWRCB on the number of beach closures and warning sign postings due to public health threats within their jurisdiction.

In addition, EPA and the Corps regulate ocean disposal sites for dredge material, and mineral extraction activities are managed by the State of California within 3 nautical miles of the coast and by the federal MMS between 3 and 12 nautical miles off the coast. Water quality issues associated with mineral extraction are managed by DFG's Office of OSPR and the federal MMS's Environmental Division within their respective jurisdictions.

The principal federal legislation controlling the discharge of ballast water is the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) and the National Invasive Species Act of 1996 (NISA). Under NISA, all vessels carrying ballast water into U.S. waters are required to keep records and provide written information to the USCG. Ships are encouraged to follow voluntary precautionary measures.

The Ballast Water Management for Control of Nonindigenous Species Act (Assembly Bill 703) went into effect in 2000, establishing a general ballast water management program for California under the direction of the State Lands Commission. The law requires all vessels that enter U.S. territorial waters (with certain exceptions) to manage ballast water according to prescribed measures in order to prevent the release of nonindigenous species into state waters. These measures include limits on where ballast water may be exchanged in relation to the coast. Failure to comply can result in civil penalties.

Also, on September 25, 2003, a new relevant package of laws was signed in California. Within the package are regulations limiting cruise ship discharges of ballast water, sewage, bilge water, and other wastes (Environmental News Service 2003).

Supplementing the oversight of state and federal agencies, hundreds of monitoring programs track coastal water quality. Sponsors of such programs include industrial dischargers, such as Exxon, C&H Sugar, and American Brass and Iron Foundry; research and educational groups, such as UC Davis; nonprofit organizations, such as the Surfrider Foundation and other environmental groups; and federal, state, and local agencies, including DFG, EPA, the U.S. Navy, municipalities, and the RWQCBs.

## Anticipated Future Conditions

Regulation of waterborne pollutants and discharges likely will become stricter in the future. However, the growing population and associated increases in discharges and pollution may offset (to an unknown extent) the benefits of more stringent regulation. Therefore, it is difficult to predict future water quality and its effects on the CCNM based on current management.

## Management Options

As discussed earlier, direct regulation of water resources is outside BLM jurisdiction. However, in protecting the biological resources of the CCNM, the following management options are available.

**Protection.** BLM could work in an advisory role with other agencies such as the SWRCB regarding the regulation of ocean water quality. As an advisor, BLM could be an advocate for water quality regulation that is consistent with protection of the CCNM's biological and other resources.

BLM could also work either independently or cooperatively with agencies that regulate water quality to help coordinate enforcement of applicable regulations. Again, because the CCNM's proclamation does not give a clear mandate for enforcement regarding indirect impacts on monument resources, such an effort would require an advisory role on the part of BLM. However, BLM could provide a forum and information for other entities and interests to address coastal water quality.

Finally, BLM could participate in coastal oil spill response programs. This is discussed in more detail under Hazardous Materials.

**Education.** BLM could initiate outreach programs that publicize the value of clean water and educate the public on the effects of water pollution. Also, interpretive and educational facilities at specific areas along the coast could address the value of clean water and educate coastal visitors on the effects of

water pollution. This effort could be accomplished through cooperative agreements and funding between BLM and other entities with coastal access in the vicinity of the CCNM, such as other federal agencies; DPR; regional, county, and city parks; and private entities such as the Monterey Bay Aquarium. Interpretive facilities could be concentrated at key portals.

**Research.** BLM could work either independently or cooperatively with other agencies and entities to monitor water quality and biological resources in the vicinity of the CCNM to determine whether water quality is adversely affecting any of the CCNM's biological resources, particularly in areas of known contamination or with sensitive resources. Such programs could include the State Mussel Watch Program, as well as a variety of other regional monitoring programs. This monitoring could provide data to support enforcement programs.

In addition, BLM could provide a clearinghouse for coastal water quality information through the CCNM. At present, no such clearinghouse exists. Under this effort, BLM could gather data from the various coastal monitoring programs and assemble it in an interactive database or GIS system.

## Wilderness

### Description of Resource

The rocks and islands of the California coast are not currently designated as wilderness. In 1997 and 1999, legislation was introduced in the U.S. Congress to designate BLM-administered coastal rocks and islands in California as wilderness within the National Wilderness Preservation System, but neither of the bills were successful.

The Federal Land and Policy Management Act (FLPMA) recognizes that public lands having wilderness characteristics possess unique resource values and will be managed within the Bureau's multiple-use mandate. As directed in Section 201 of FLPMA, if lands are found to have wilderness characteristics through inventories, the Bureau land use planning process (defined in Section 202 of FLPMA) is required to address whether it may protect those wilderness characteristics against or with other possible resource values and uses. In that analysis, BLM should consider the quality of the wilderness characteristics and its ability to preserve those characteristics, the prescriptions necessary to protect the specific wilderness characteristics, the presence of other resource values and uses and the effect of protecting wilderness characteristics on them, the effect of managing for other resource uses on wilderness characteristics, and the contribution that protecting lands with wilderness characteristics provides in meeting other resource management goals and objectives in the plan.

“Wilderness character” is defined as land:

- (1) that has been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable;
- (2) that has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
- (3) with at least 5,000 acres of land or of sufficient size as to make practicable its preservation and use in unimpaired condition; and
- (4) that potentially contains ecological, geological, or other features of scientific, educational, scenic, or historical value.

To date, the CCNM has not been inventoried to determine whether all or portions of the monument possess wilderness character. However, the entire CCNM almost certainly fulfills all four criteria, with the possible exception of criterion (3), because total acreage for the CCNM is currently less than 900 acres.

Some coastal lands adjacent to the CCNM have recognized wilderness characteristics. Table 10 shows which coastal lands are recognized as federal wilderness areas or are designated as potential wilderness areas.

**Table 10.** Wilderness Areas and Potential Wilderness Areas in Coastal California

Coastal Area (and Management Agency)	Wilderness Area	Potential Wilderness Area
King Range (U.S. Bureau of Land Management)		9
Ventana Wilderness (U.S. Forest Service)	9	
Silver Peak Wilderness (U.S. Forest Service)	9	
Source: <a href="http://www.calwild.org/places/">http://www.calwild.org/places/</a> .		

## Current Management Situation

The CCNM is not being managed to preserve its wilderness character at this time. The area has not been designated as a wilderness study area through the FLPMA Section 603 inventory process.

## Anticipated Future Conditions

With the designation of the coastal rocks and islands as a national monument, it is unlikely that the CCNM’s wilderness character will be harmed.

## Management Options

The following management options are proposed.

**Research.** The CCNM could be inventoried to determine what areas within the monument have wilderness character. While management of the CCNM is anticipated to be largely consistent with lands possessing wilderness character regardless of the inventory, such an inventory and designation would recognize these characteristics of the CCNM.

**Protection.** Following the inventory identified above, portions or all of the CCNM could be identified as possessing wilderness character. The areas where such character exists would be delineated, and specific management prescriptions to protect the wilderness character would be developed.

**Education.** Identification of the wilderness characteristics of the monument would provide an educational opportunity at the CCNM. Landside interpretive areas could highlight the value of the monument as wilderness and its unique value as such.

## Wildlife

### Description of Resource

The wildlife resources of the CCNM are best represented by seabirds, shorebirds, and marine mammals. Although the eggs of seabirds historically were gathered for human consumption, and certain marine mammals were hunted for fur and food, there is currently no legal harvesting of these species. Their main economic value is related to wildlife viewing and tourism.

### Physical Conditions

The offshore rocks in the CCNM are distributed along the entire length of California. They are typically small, close to the mainland, and of low elevation. Many are exposed rocks, washed by active seas. A small but important number of these rocks are large enough to have soil and low vegetation. The largest of the rocks are slightly over 10 acres in size. These rocks support a small community of plants and, in some cases, breeding seabirds. Some of the smaller rocks also support small numbers of nesting seabirds. Many of the rocks washed by high tides and heavy waves are important feeding sites for a suite of resident, migrating, and wintering shorebirds.

## Wildlife Resources

### Birds

Nineteen species of marine birds and predatory birds consistently use offshore rocks for breeding in California (Table 11). One of these is listed as endangered under ESA, two are listed as endangered under CESA and are fully protected species in California, seven are considered California species of special concern, and one has been designated a sensitive species by BLM.

Breeding habitat requirements vary among these species; some require soil, others require crevices, and many use open areas, vegetated or not. The key characteristics of these breeding sites are suitable locations for nests and the absence of terrestrial predators.

A small complement of shorebirds uses the lower elevations of CCONM rocks for feeding, primarily during migration and winter. These birds include black oystercatcher (*Haematopus bachmani*), ruddy turnstone (*Arenaria interpres*), black turnstone (*Arenaria melanocephala*), wandering tattler (*Heteroscelus incanus*), surfbird (*Aprhiza virgata*), and rock sandpiper (*Calidris ptilocnemis*). During high tides, flocks of these species roost above the waves.



**Table 11.** Primary Breeding Birds and Predatory Birds of the CCNM

Species	Status
Leach's storm-petrel ( <i>Oceanodroma leucorhoa</i> )	NA
Ashy storm-petrel ( <i>Oceanodroma homochroa</i> )	CSC
Black storm-petrel ( <i>Oceanodroma melania</i> )	CSC
Fork-tailed storm-petrel ( <i>Oceanodroma furcata</i> )	CSC
Brown pelican ( <i>Pelecanus occidentalis</i> )	FE, SE, CFP
Double-crested cormorant ( <i>Phalacrocorax auritus</i> )	CSC
Pelagic cormorant ( <i>Phalacrocorax pelagicus</i> )	NA
Brandt's cormorant ( <i>Phalacrocorax penicillatus</i> )	NA
Snowy egret ( <i>Egretta thula</i> )	NA
Black-crowned night heron ( <i>Nycticorax nycticorax</i> )	BLMS
Peregrine falcon ( <i>Falco peregrinus</i> )	SE, CFP
Black oystercatcher ( <i>Haematopus bachmani</i> )	NA
Western gull ( <i>Larus occidentalis</i> )	NA
Common murre ( <i>Uria aalge</i> )	NA
Pigeon guillemot ( <i>Cepphus columba</i> )	NA
Xantus's murrelet ( <i>Synthliboramphus hypoleucus</i> )	SCT, CSC
Cassin's auklet ( <i>Ptychoramphus aleuticus</i> )	NA
Rhinoceros auklet ( <i>Cerorhinca monocerta</i> )	CSC
Tufted puffin ( <i>Fratercula cirrhata</i> )	CSC

## Notes:

- BLMS = BLM sensitive species.
- CFP = California fully protected species.
- CSC = California species of special concern.
- FE = Federally listed as endangered.
- NA = No special status.
- SCT = State candidate for listing as threatened.
- SE = State-listed as endangered.

## Marine Mammals

Six marine mammal species regularly use offshore rocks for hauling out or breeding (Table 12). Two of these, Steller's sea lion (*Eumetopius jubatus*) and the sea otter (*Enhydra lutris*), are listed as threatened under ESA. The northern elephant seal (*Mirounga angustirostris*) and sea otter are fully protected species in California.

**Table 12.** Marine Mammals of the CCNM

Species	Status
Northern fur seal ( <i>Callorhinus ursinus</i> )	NA
Guadalupe fur seal ( <i>Arctocephalus townsendi</i> )	FT, ST, CFP
Steller's sea lion ( <i>Eumetopius jubatus</i> )	FT
California sea lion ( <i>Zalophus californianus</i> )	NA
Harbor seal ( <i>Phoca vitulina</i> )	NA
Northern elephant seal ( <i>Mirounga angustirostris</i> )	CFP
Sea otter ( <i>Enhydra lutris</i> )	FT, CFP

Notes:

CFP = California fully protected species.

FT = Federally listed as threatened.

NA = No special status.

ST = California threatened.

Harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) are common on many of the rocks along the coast. Both species typically choose sites that are sheltered from disturbance by human activities, although, in some areas, the animals have acclimated to chronic human disturbance. Steller's sea lions breed on a few of the remote CCNM rocks in northern California. The other species are found primarily on larger islands (fur seal and elephant seal), the mainland (elephant seal), or at sea (sea otter).

## Intertidal Invertebrates

The splash zone and upper intertidal zone above mean high tide provide habitat for a variety of marine invertebrates, including rock louse, periwinkles, limpets, chitons, barnacles, and, during high water, hermit crabs and shore crabs. In addition, on some of the larger islands with grass or shrub communities, a variety of invertebrates, such as land snails, grasshoppers, crickets, flies and bees, butterflies, and moths may be found, depending on proximity to the mainland and suitability of habitat.

No comprehensive inventory of invertebrates has been conducted in the CCNM, so it not known whether any special-status invertebrates occur there. However, surveys of the larger coastal islands not included in the CCNM have identified numerous endemic invertebrates, including crickets, moths, and butterflies, that live on the coastal islands; none are currently listed as threatened or endangered.

No information is available regarding the presence of invasive invertebrates in the CCNM.

Both terrestrial and intertidal invertebrates provide food for foraging bird species, including American oystercatcher, ruddy turnstone, black turnstone, wandering tattler, surfbird, rock sandpiper, and gulls (*Larus* spp.).

### **Other Species**

Species other than those discussed above (e.g., passerine birds) are likely to be found on the CCNM, particularly on larger rocks and islands. No comprehensive inventory of such species has been conducted to date, nor is information available regarding the presence of invasive species, special-status species, or species that may pose threats to other endemic or special-status species found in the monument.

## **Existing Databases**

### **Seabirds**

The most recent inventory of seabirds on the islands and offshore rocks of California was prepared by Sowls et al. (1980). This survey, while comprehensive, is critically in need of updating. Populations of some of the larger seabirds such as common murre (*Uria aalge*) have been surveyed from the air, but many small breeding populations of seabirds have not been surveyed since the 1970s (Manuwal et al. 2001). There is very little information on the status of most of the seabird colonies within the CCNM. This is especially true for the smallest colonies, as well as the nocturnal seabirds. Future surveys likely will document more nesting sites than previously recorded because new technology now enables surveyors to better detect some of the more secretive birds, such as storm-petrels and small auklets, which are active mostly at night.

### **Marine Mammals**

DFG and its cooperators conduct monthly surveys to document the presence of pinnipeds along the coast of California (Fluharty 1999, Read and Reynolds 2001).

### **Intertidal Invertebrates**

There are no databases documenting terrestrial or intertidal invertebrates in the CCNM.

### **Other Species**

There are no databases documenting other species in the CCNM.

## Threats to Wildlife

### Degradation of Habitat

In general, habitat conditions in the CCNM are relatively protected by the remoteness of the offshore rocks and the difficulty of gaining access to them. As discussed under Vegetation, invasive or exotic plant species have become established on some islands. The effect of these plants on wildlife species is essentially unknown. Invasive animals, such as rats (*Rattus* sp.) and mice (*Mus musculus*), can have a significant negative effects on seabird colonies, but the status of these rodents in the CCNM is not known. Recently, concern has been expressed about the potential competitive exclusion effect of the growing Canada goose (*Branta canadensis*) population (including the introduced Great Basin subspecies) on nesting seabirds along the northern California coast.

### Disturbance by Human Activities

Although most of the CCNM rocks and islands are rarely visited by people, a few are located close enough to coastal mainland and access points to have been affected by human activities. For example, some rocks present hazards to boat traffic, so navigational aids have been installed on them. Direct disturbance by humans is the most obvious impact on wildlife species that use the offshore rocks. Disturbance can result from various unrelated activities, but generally involves people coming close enough to nesting birds or resting marine mammals to cause detrimental changes in their behavior, including flight and the consequential abandonment of nests or young. Generally, these disturbances have the highest impacts during the bird nesting season and the pinniped pupping season.

### Effects Caused by Fishing and Abalone/Mussel Collection

In areas where CCNM rocks and islands are located near boat harbors, they often are popular fishing destinations. Although fishing itself does not necessarily disturb birds and mammals, the presence, noise, and movement of fishing boats close to the rocks can cause stress to nesting and roosting birds and marine mammals.

Nesting Brandt's (*Phalacrocorax penicillatus*) and pelagic cormorants (*Phalacrocorax pelagicus*), common murres, and Steller's sea lions are especially vulnerable. Pelagic cormorants nest on cliffs generally inaccessible to terrestrial predators, but in many cases, these cliffs are near deep water suitable for small boat traffic and fishing. The common murres and other colonial nesters are particularly susceptible to nest predation by western gulls and common ravens. When these birds are frightened from their nests by fishing or other disturbance activities, their eggs and young chicks are left exposed and unprotected from this predation. One or two ill-timed disturbances can potentially cause complete breeding failure in a colony.

Pelagic cormorant nesting sites are distributed along the entire coastline, whereas Brandt's cormorants and common murres are most susceptible in the northern half of the state. Large breeding colonies are located on several offshore rocks

near the towns of Mendocino and Trinidad. Steller's sea lions still presumably breed on many of the offshore rocks north of Cape Mendocino, and the waters surrounding the larger rocks are known to be productive fishing sites.

Diving for abalone is another popular marine sport that is common in the CCNM along the northern coast. Waters surrounding offshore rocks are particularly popular sites for this activity. At some locations, such as Van Damme State Beach in Mendocino County, abalone divers use kayaks and inflatable boats launched from the mainland beach to gain access to the offshore rocks. Although most of the activities associated with abalone diving are not particularly likely to disturb birds, marine mammals, especially harbor seals, may be disturbed by approaching boaters. Also, abalone divers accessing offshore rocks could disturb nesting pelagic cormorants, pigeon guillemots (*Cephus columba*), or black oystercatchers. If divers stay on the rocks for more than a few minutes, oystercatcher eggs and small chicks can be lost to gulls and other avian predators.

Another legal consumptive activity is mussel collecting. Although most mussel collectors confine their activities to mainland shorelines, those who use boats for abalone diving occasionally disembark on offshore rocks in search of mussel beds. This type of activity is likely to disturb black oystercatchers if they are nesting nearby, and can cause loss of eggs or small chicks.

### **Disturbance by Recreational Kayakers and Scuba Divers**

Recreational kayaking has become common at many locations along the California coast. Some of the popular launching sites in northern California, such as Van Damme State Beach, are located near sensitive offshore rocks. Although most of the activities associated with kayaking are not likely to disturb seabirds, resting or pupping harbor seals are prone to disturbance by boaters who approach too closely.

Scuba divers, like abalone divers, are not usually a cause of disturbance to birds and marine mammals. However, kayakers or scuba divers who leave their boats or the water to walk on accessible rocks can disturb nesting black oystercatchers, pelagic cormorants, or pigeon guillemots. Any person going ashore, for any reason, on a rock with nesting seabirds, especially murre and cormorants, can cause significant harm.

### **Effects Caused by Seaweed Collection**

As discussed under Vegetation, there is a small specialty-food industry that involves harvesting seaweeds. Seaweed collectors who go ashore on rocks that have nesting seabirds can cause the types of disturbances described above.

## **Present Management Situation**

Protection of marine birds, mammals, and invertebrates is mandated by the international Migratory Bird Treaty Act, the Marine Mammal Protection Act, ESA, CESA, the California Coastal Commission Act, the Clean Water Act, the Porter-Cologne Water Quality Control Act, and sections of the California Fish

and Game Code. Protection of these resources is also mandated by the Presidential Proclamation that established the CCNM. Day-to-day protection of the marine birds and mammals using the CCNM is provided primarily by DFG. No specific management of the offshore rocks has been implemented by BLM to date. Other authorities involved in implementing state and federal regulations are NOAA Fisheries, USFWS, and local authorities.

Management of wildlife is primarily focused on minimizing pollution, disturbance by recreational and commercial activities, and introduction of exotic species. There are no specific field office policies for management of animals within the CCNM, beyond the restrictions stipulated by state and federal regulations for listed species. The level of consistency in wildlife management among overlapping jurisdictions has not been determined.

## Anticipated Future Conditions

Wildlife population changes, such as changes in distribution and viability, have been linked to short- and long-term trends in ocean temperatures (e.g., El Niño events). No trends in wildlife populations in the CCNM have yet been linked to such natural changes.

Dramatic population changes in some seabird and marine mammal species have also been attributed to human activities. Recreational use of coastal areas is expected to increase, resulting in more frequent and varied disturbances to wildlife, especially at sites close to human population centers. Intertidal and terrestrial invertebrates will also be subject to disturbance by human activity.

## Management Options

Ideally, research would be conducted to identify the needs for and levels of management, but, in reality, some management is necessary even if reliant on limited information. For this reason, management activities should be conservative, with the intent of accomplishing specific goals with a minimum of negative impact on seabirds and marine mammals. Most management options considered for the CCNM would likely be designed and conducted in cooperation with other government agencies, universities and colleges, nonprofit groups, and volunteers.

**Research.** BLM should make elimination of the identified gaps in knowledge about the distribution and status of seabirds and marine mammals the primary goal of wildlife research in the CCNM. This research can be done by contracting and/or cooperating with qualified biologists. Given the likely budgetary constraints of the near future, much of this basic research may be done by students and interested volunteers. The task would be to identify specific data gaps, publicize the need for specific survey and status investigations, and cooperate with appropriate groups to enhance their ability to perform the necessary projects. Academic institutions, local Audubon or docent/steward groups, professional conservation organizations, and private

consultants are all potential participants in these efforts, depending on the scope and the nature of the projects.

**Protection.** Protection actions would include managing both human visitors and wildlife populations. Activities involving management of people would probably be the easiest to accomplish and have the greatest potential for immediate positive results. Most direct human disturbance can be managed effectively through education (as discussed below) and the implementation of seasonal restrictions on some activities. Near important seabird nesting sites and at access points, appropriate signs and educational materials could be made available to the public. Seasonal distance restrictions could be designed to keep people from disturbing nesting seabirds and pupping marine mammals. Enforcement of these restrictions and the existing laws protecting seabirds and marine mammals could be conducted in cooperation with a range of law enforcement organizations, including DFG wardens, DPR rangers, local municipal officers, and volunteer stewards.

Population management would involve direct management of wildlife resources, including activities that directly affect seabirds and marine mammals. Examples of these activities are implementation of decoy programs that attempt to attract seabirds to potential breeding sites, removal or control of invasive plant or animal species on offshore rocks, and creation of nesting sites and predator control.

**Education.** Education programs could be designed to include the primary goal of helping with protection management, as well as a more general goal of increasing public awareness of wildlife resources in California. Brochures and signage could stress the effects of humans on wildlife, and especially the effects of interference on nesting and pupping habitat. As mentioned above, educational materials could be placed specifically near important nesting sites to encourage respectful behavior.

**Planning.** BLM could coordinate with NPS and DFG when devising a seabird management plan. Also, BLM could plan research and protection efforts to tie in with current projects by groups such PISCO and SIMoN, as well as existing programs in DFG and DPR.

## Chapter 4

# References Cited

### Printed References

- BLM. See U.S. Bureau of Land Management.
- BLM Protection and Response Group. 2002. *Bureau of Land Management work plan for EOI emergency preparedness & responses strategy—oil discharge & hazardous substance releases*. November.
- California Coastal Commission. 1997. *The 1997 California coastal access guide*.
- California Resources Agency. 1997. *California's ocean resources: An agenda for the future*. March.
- Del Cioppo, N. 1983. *California Department of Parks and Recreation archaeological site record form, Yankee Blade shipwreck*. On file at the Central Coast Information Center of the California Historical Resources Information System. Los Angeles.
- Environmental News Service. 2003. California Prohibits Cruise Ship Wastewater Discharges. September 26, 2003.
- Fluharty, M. J. 1999. *Summary of Pacific harbor seal, Phoca vitulina richardsi, surveys in California, 1982 to 1995*. (CDFG – MR Administrative Report 99-1.)
- Jones & Stokes. 2003. *Scoping report for the California Coastal National Monument Resource Management Plan*. May. (J&S 02-016.02.) Sacramento, CA.
- Kroeber, A. 1925. *Handbook of the Indians of California*. New York: Dover Publications.
- Loeb, E. 1926. Pomo Folkways. *University of California Publications in American Archaeology and Ethnology* 19(2):149–405. Berkeley, CA.



- Manuwal, D. A., H. R. Carter, T. S. Zimmerman, and D. L. Orthmeyer (eds.). 2001. Biology and conservation of the common murre in California, Oregon, Washington, and British Columbia. *Vol. 1: Natural history and population trends*. U.S. Geological Survey, Biological Resources Division. (Information and Technology Report USGS/BRD/ITR-2000-0012.) Washington, DC.
- McLendon, S. and R. L. Oswalt. 1978. Pomo: Introduction. Pages 274-288 in R. F. Heizer (ed.), *Handbook of North American Indians. Volume 8: California*. Washington, DC.: Smithsonian Institution.
- Moller, R. M. and J. Fitz. 1994. *Economic assessment of ocean-dependent activities*. May. California Research Bureau, California State Library.
- Moratto, M. 1984. *California archaeology*. Orlando, CA: Academic Press.
- National Park Service. 1990. *Guidelines for evaluating and documenting traditional cultural properties*. (National Register Bulletin No. 38.) U.S. Department of the Interior, National Park Service, Interagency Resources Division. Washington, DC.
- NPS. See National Park Service.
- Read, R. B. and K. Reynolds. 2001. *Final Report: Survey of harbor seals in California 2001*. (CDFG Administrative Report.)
- Science Applications. 2003. *Automated monitoring systems for compliance of disposal operations at EPA-designated ocean disposal sites*. March 31. Prepared for U.S. Environmental Protection Agency, Region IX.
- Sowls, A. L., A. R. DeGange, J. W. Nelson, and G. S. Lester. 1980. *Catalog of California seabird colonies*. U.S. Dept. Interior, Fish and Wildlife Service. (FWS/OBS-80/37.)
- State Water Resources Control Board. 2001. *California Ocean Plan*. December 2001.
- . 2003. *2002 CWA Section 303(d) list of water quality limited segments*. Resolution 2003 – 0009. February 4.
- SWRCB. See State Water Resources Control Board.
- U.S. Bureau of Land Management. 2002. *Guidance to address environmental justice (EJ) in land use plans and related National Environmental Policy Act (NEPA) documents*. (Instruction Memorandum No. 2002-164.) Washington, DC.
- USGS. See U.S. Geological Survey.

## Web Sites

California Coastal Sediment Workgroup. 2002. California Coastal Sediment Management Workgroup. Available: <<http://www.spd.usace.army.mil/csmwonline/>>. Accessed: September 24, 2003.

California Resources Agency. 1999. Oil, Gas, and Mineral Resources. Available: <[http://ceres.ca.gov/ocean/theme/mineral\\_background.html](http://ceres.ca.gov/ocean/theme/mineral_background.html)>. Accessed: August 1, 2003.

California Wilderness Coalition. 2003. Wild Places. Available: <<http://www.calwild.org/places/>>. Accessed: September 23, 2003.

U.S. Geological Survey. 2003. Seeps Home Page. Available: <<http://seeps.wr.usgs.gov/>>. Accessed: September 24, 2003.

## Personal Communications

Stanisewski, Glenn. Coordinator, USGS SSURGO Program. Telephone conversation—September 23, 2003.

## Chapter 5

# List of Preparers

This document has been prepared for BLM by Jones & Stokes. The individuals who contributed to this document are listed below.

### Jones & Stokes

Mike Rushton	Principal-in-Charge Minerals and Energy Wilderness
Michael Stevenson	Project Manager Climate and Air Quality Geology, Topography, and Soils Paleontological Resources Water Resources
Maryann Hulsman	Project Coordinator Environmental Justice Hazardous Materials Research
Sara Martin	Project Coordinator Land Use
Jennifer Ames	Socioeconomic Conditions
Karen Crawford	Cultural Resources
Melissa Crowley	Editing Formatting
Chris Elliott	Visual Resources
Travis Hemmen	Facilities and Infrastructure Lands and Realty Public Safety and Law Enforcement
Ed West	Intertidal and Other Wildlife

## **Nature Tourism Planning**

Robert Garrison

Access  
Education  
Recreation

## **Mad River Biologists**

Ron LeValley

Marine Mammals and Wildlife  
Vegetation

<b>Contents</b>	Error! Bookmark not defined.
<b>Tables</b>	<b>4</b>
<b>Acronyms and Abbreviations .....</b>	<b>5</b>
<b>Chapter 1</b>	<b>1</b>
<b>California Coastal National Monument Planning Area Description .....</b>	<b>1</b>
Introduction .....	1
Planning Area Description .....	3
Management Approach .....	5
<b>Chapter 2</b>	<b>1</b>
<b>Legal and Regulatory Context .....</b>	<b>1</b>
<b>Chapter 3</b>	<b>1</b>
<b>The Resource Bases .....</b>	<b>1</b>
Introduction .....	1
Access .....	1
Description of Resource .....	1
Present Management Situation .....	2
Anticipated Future Conditions .....	2
Management Options .....	3
Climate and Air Quality .....	4
Description of Resource .....	4
Present Management Situation .....	4
Anticipated Future Conditions .....	5
Management Options .....	5
Cultural Resources .....	5
Description of Resource .....	5
Present Management Situation .....	6
Anticipated Future Conditions .....	6
Management Options .....	7
Education/Interpretation .....	9
Description of Resource .....	9
Present Management Situation .....	9
Anticipated Future Conditions .....	10
Management Options .....	10
Environmental Justice .....	11
Description of Resource .....	11
Present Management Situation .....	13
Anticipated Future Conditions .....	13
Management Options .....	14
Facilities and Infrastructure .....	15

Description of Resource .....	15
Present Management Situation .....	15
Anticipated Future Conditions.....	15
Management Options .....	16
Geology, Topography, and Soil Resources .....	17
Description of Resource .....	17
Present Management Situation .....	19
Anticipated Future Conditions.....	20
Management Options .....	20
Hazardous Materials.....	21
Description of Resource .....	21
Present Management Situation .....	22
Anticipated Future Conditions.....	22
Management Options .....	22
Land Use Planning .....	24
Description of Resource .....	24
Present Management Situation .....	24
Anticipated Future Conditions.....	25
Management Options .....	25
Lands and Realty.....	26
Description of Resource .....	26
Present Management Situation .....	27
Anticipated Future Conditions.....	33
Management Options .....	35
Minerals and Energy Programs .....	36
Description of Resource .....	36
Present Management Situation .....	38
Anticipated Future Conditions.....	38
Management Options .....	39
Paleontological Resources .....	40
Description of Resource .....	40
Present Management Situation .....	40
Anticipated Future Conditions.....	40
Management Options .....	41
Public Safety and Law Enforcement.....	42
Description of Resource .....	42
Present Management Situation .....	42
Anticipated Future Conditions.....	43
Management Options .....	43
Recreation .....	45
Description of Resource .....	45
Present Management Situation .....	47
Anticipated Future Conditions.....	47
Management Options .....	48
Research .....	49
Description of Resource .....	49
Present Management Situation .....	51
Anticipated Future Conditions.....	51
Management Options .....	52
Socioeconomic Conditions .....	54

Description of Resource .....	54
Present Management Situation .....	54
Anticipated Future Conditions.....	54
Management Options .....	55
Vegetation .....	55
Description of Resource .....	55
Present Management Situation .....	57
Anticipated Future Conditions.....	57
Management Options .....	57
Visual Resources.....	58
Description of Resource .....	58
Present Management Situation .....	58
Anticipated Future Conditions.....	59
Management Options .....	59
Water Resources.....	60
Description of Resource .....	60
Present Management Situation .....	63
Anticipated Future Conditions.....	64
Management Options .....	64
Wilderness.....	65
Description of Resource .....	65
Current Management Situation.....	66
Anticipated Future Conditions.....	66
Management Options .....	67
Wildlife .....	67
Description of Resource .....	67
Present Management Situation .....	73
Anticipated Future Conditions.....	74
Management Options .....	74

## Chapter 4     1

<b>References Cited.....</b>	<b>1</b>
Printed References.....	1
Web Sites .....	3
Personal Communications.....	3

## Chapter 5     1

<b>List of Preparers.....</b>	<b>1</b>
Jones & Stokes.....	1
Nature Tourism Planning.....	2
Mad River Biologists.....	2

### Acronyms

Management Situation Analysis (MSA) .....	1
the Bureau of Land Management's (BLM's).....	1
a Resource Management Plan (RMP).....	1
California Coastal National Monument (CCNM).....	1

environmental impact statement (EIS).....	2
California Department of Parks and Recreation (DPR),.....	5
National Park Service (NPS), .....	5
National Oceanic and Atmospheric Administration (NOAA),.....	5
California Air Resources Board (ARB) .....	4
before present (BP) .....	5
traditional cultural properties (TCPs) .....	5
National Historic Preservation Act (NHPA),.....	6
the Archaeological Resources Protection Act (ARPA) .....	6
Advisory Council on Historic Preservation (ACHP) .....	6
State Historic Preservation Officers (SHPOs). .....	6
Federal Land Policy and Management Act (FLPMA).....	6
the American Indian Religious Freedom Act (AIRFA).....	6
Native American Graves Protection and Repatriation Act (NAGPRA) .....	6
California Historical Resources Information System (CHRIS) .....	7
Native American Heritage Commission (NAHC). .....	7
University of California, Los Angeles (UCLA).....	8
University of California, Davis (UCD).....	<b>Error! Bookmark not defined.</b>
cultural resources management plan (CRMP). .....	8
U.S. Department of the Interior (USDI) .....	<b>Error! Bookmark not defined.</b>
the U.S. Geological Survey (USGS).....	19
Natural Resources Conservation Service (NRCS).....	19
Office of Spill Prevention and Response (OSPR) .....	22
hazardous waste operations and emergency response (HAZWOPER).....	23
California Coastal Commission (CCC).....	<b>Error! Bookmark not defined.</b>
a Memorandum of Understanding (MOU) .....	41
National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries). .....	42
the Partnership for Interdisciplinary Studies of Coastal Oceans' (PISCO's).....	53
State Water Resources Control Board (SWRCB).....	63
various regional water quality control boards (RWQCBs) .....	63
Federal Land and Policy Management Act (FLPMA).....	65
the Sanctuary Integrated Monitoring Network (SIMoN).....	75

## Citations

Scoping Report for the California Coastal National Monument Resource Management Plan (Jones & Stokes, May 2003). .....	7
California Coastal Commission 1997 .....	1
Moratto 1984.....	5
NPS 1990 .....	5
Kroeber 1925 .....	5
Loeb 1926 .....	5
McLendon and Oswalt 1978 .....	5
(Del Cioppo 1983). .....	6
Instruction Memorandum (IM) No. 2002-164, May 7, 2002 (BLM 2002).....	13
California Resources Agency 1999.....	22
BLM Protection and Response Group 2002 .....	23
Sanctuary Science: Evaluation of Status and Information Needs (NOAA 2002),.....	53
SWRCB, 2003.....	<b>Error! Bookmark not defined.</b>
Sowls et al. (1980). .....	71



(Manuwal et al. 2001 .....	71
----------------------------	----

## Tables

Table 1 .....	1
Table 1. BLM Planning Process .....	1
Table 2 .....	1
Table 2. List of Legal and Regulatory Compliance Issues.....	2
Table 3 .....	27
Table 3. Islands Not Included in the CCNM .....	32
Table 5 .....	36
Table 5. Power Production in the Coastal Counties.....	36
Table 6 .....	45
Table 6. 1992 California Coastal State Park and Recreation Area Attendance (in thousands of persons)	45
Table 7 .....	46
Table 7. 2002 National Park Service Visitor Summary by Park.....	46
Table 8 .....	49
Table 8. California Coastal Research Institutions.....	50
Table 8. California Coastal Research Institutions.....	51
Table 9 .....	62
Table 9. Coastal Impaired Water Bodies .....	62
Table 10 .....	66
Table 10. Wilderness Areas and Potential Wilderness Areas in Coastal California.....	66
Table 11 .....	68
Table 11. Primary Breeding Birds and Predatory Birds of the CCNM .....	69
Table 12 .....	69
Table 12. Marine Mammals of the CCNM.....	70

## Figures

**Error! No table of figures entries found.**

## Miscellaneous

**Error! No table of figures entries found.**

## Glossary

**Error! No table of figures entries found.**